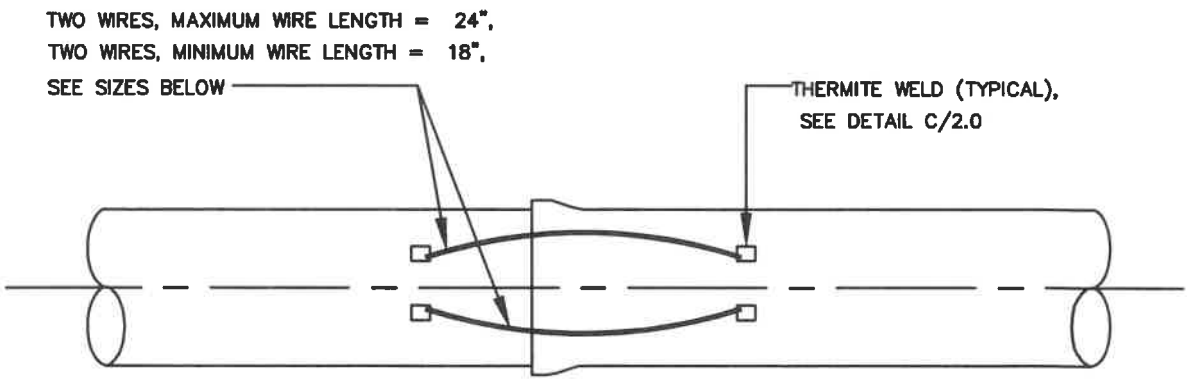
SECTION VI

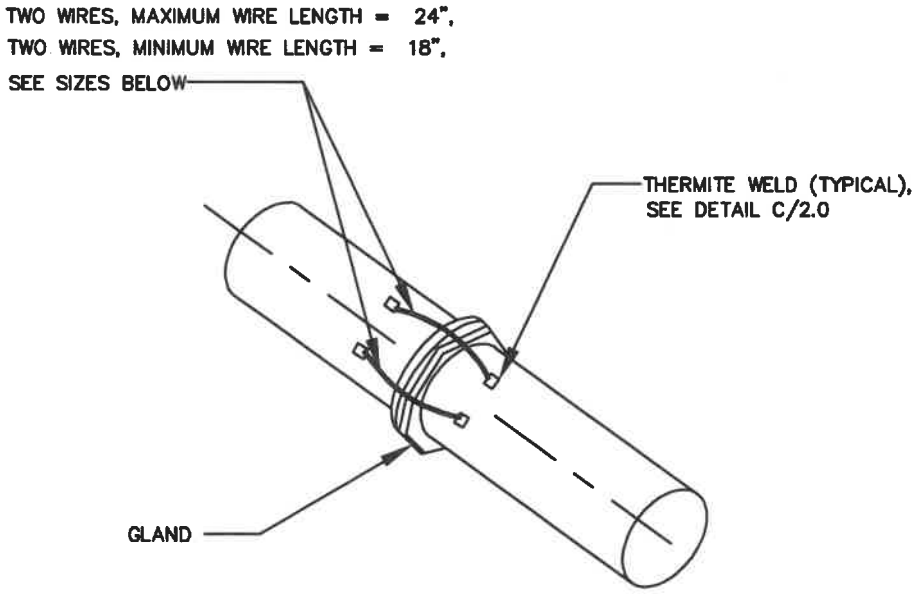
CORROSION DETAILS

SECTION VI- CORROSION DETAILS

TABLE OF CONTENTS



PUSH-ON JOINT



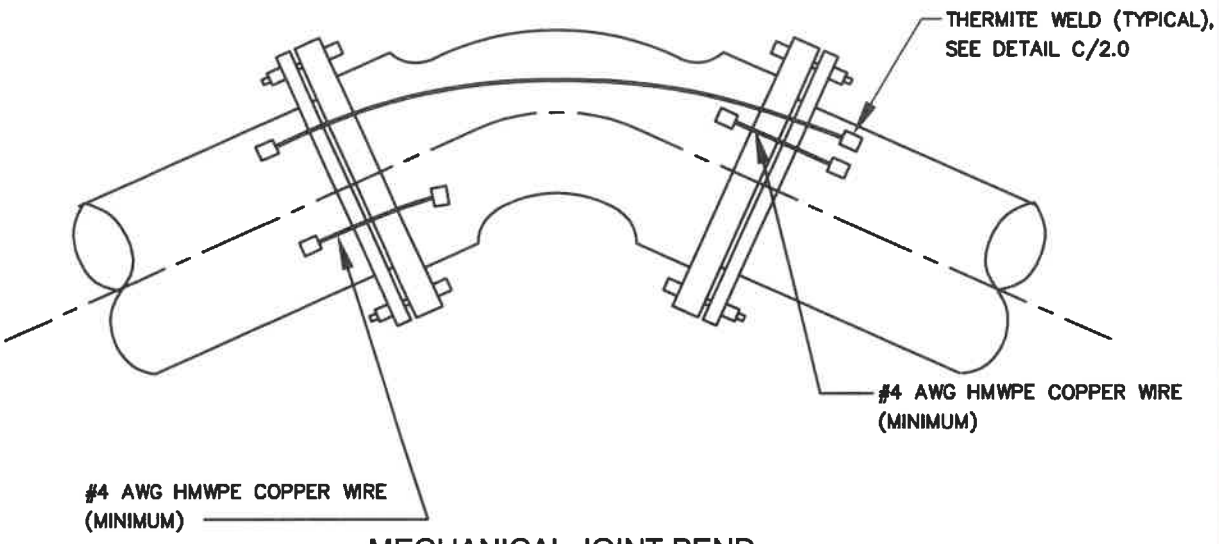
MECHANICAL JOINT

BOND WIRE SIZE	
PIPE DIAMETER	WIRE SIZE
3" THRU 18"	# 4 AWG HMWPE
OVER 18"	# 2 AWG HMWPE

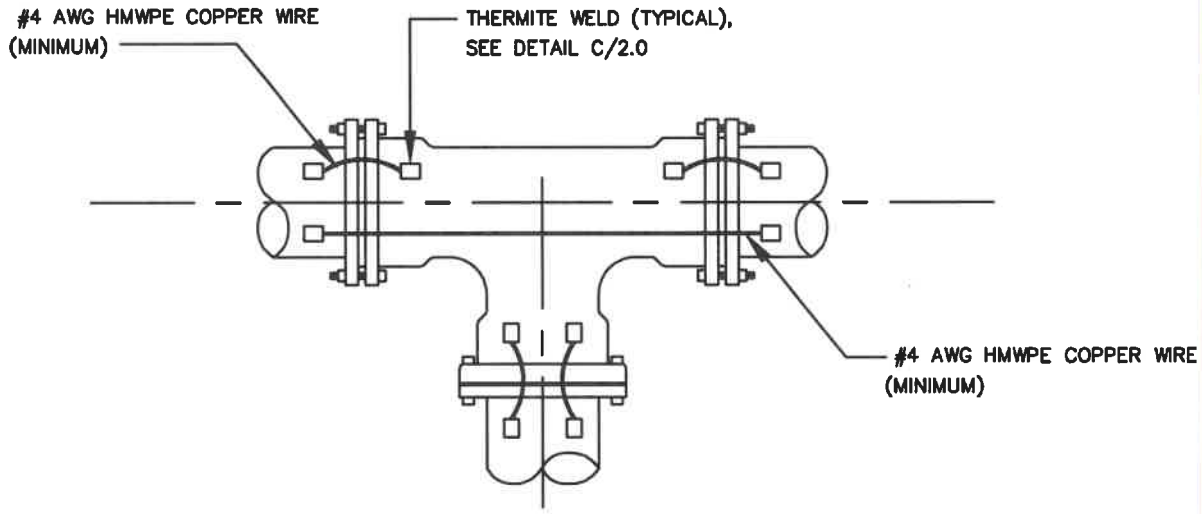
NOTE:

1. THE BOND WIRE SHALL BE STRANDED COPPER WIRE WITH HMWPE INSULATION.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL DUCTILE IRON PIPE JOINT BOND	C / 1.0



MECHANICAL JOINT BEND

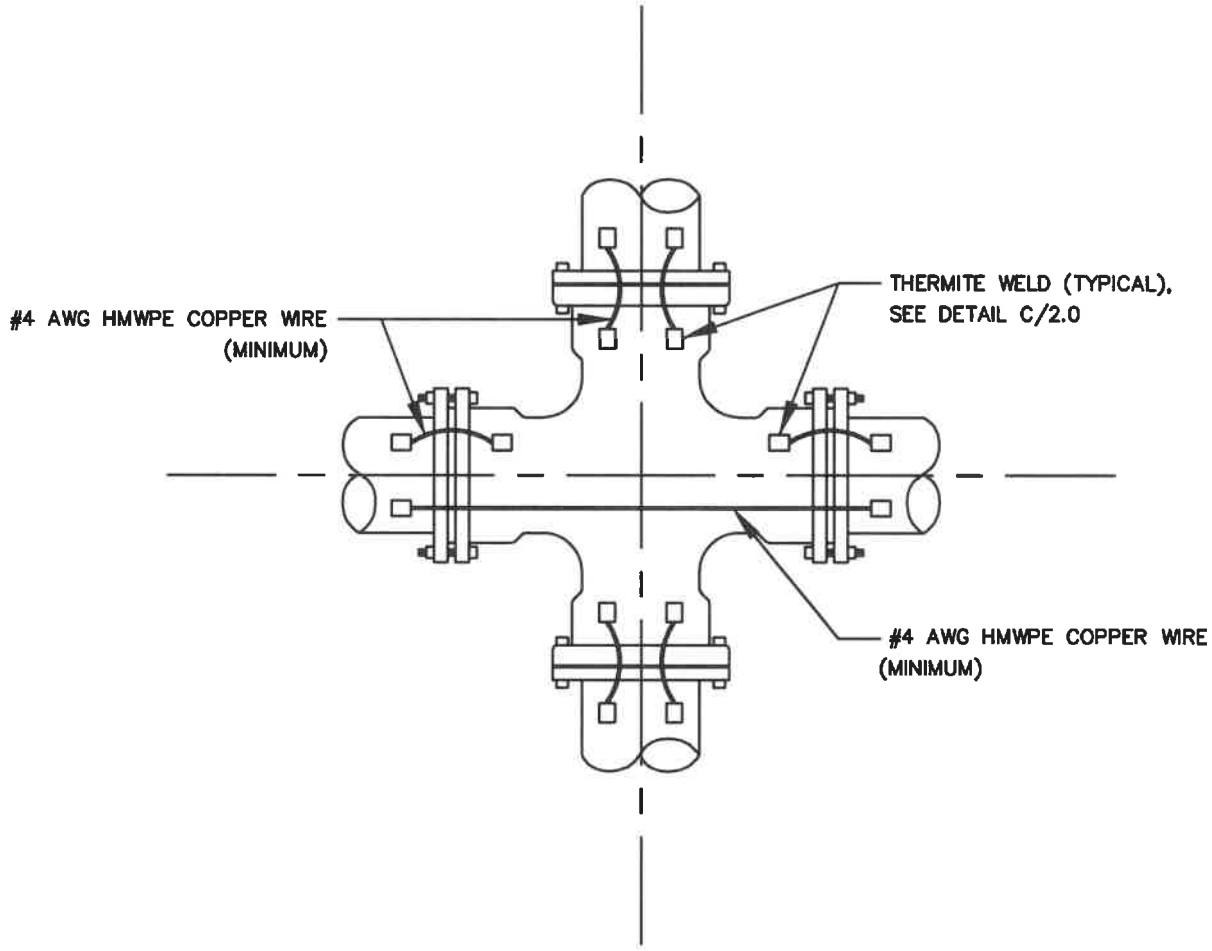


MECHANICAL JOINT TEE

NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. SEE DETAIL C/1.0 FOR JOINT BONDING OF PUSH-ON JOINT.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL DUCTILE IRON PIPE BONDING OF FITTING JOINTS	C 1.1

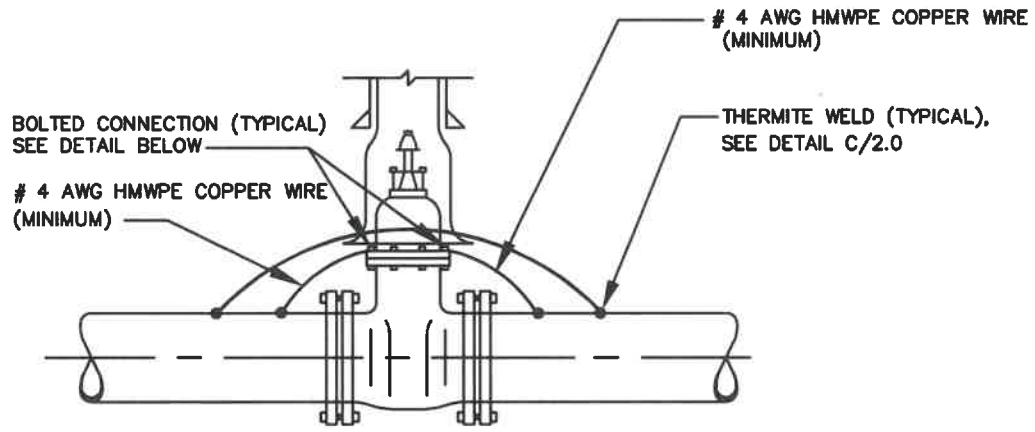


MECHANICAL JOINT CROSS

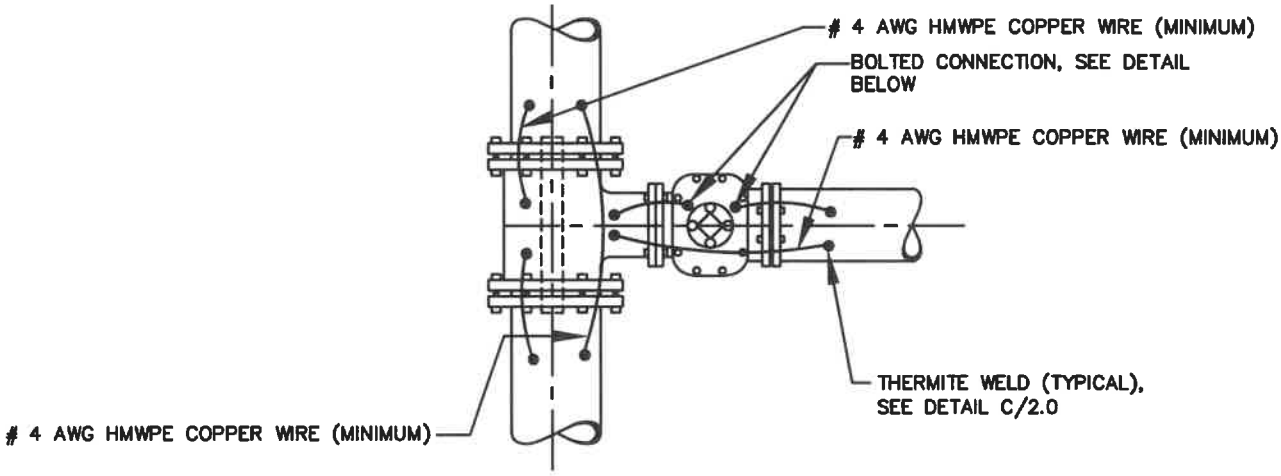
NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. SEE DETAIL C/1.0 FOR JOINT BONDING OF PUSH-ON JOINT.

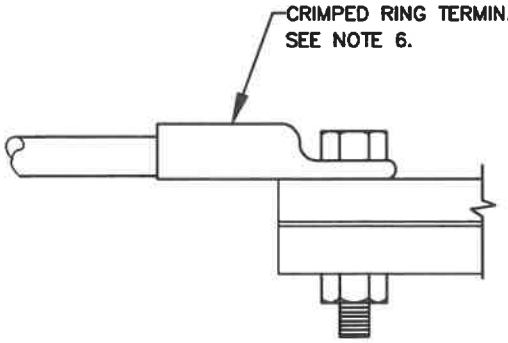
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 5-26-21 Mike Harmen Chief Engineer	STANDARD DETAIL DUCTILE IRON PIPE BONDING OF FITTING JOINTS	C 1.1a



IN LINE VALVE BONDING



TEE OR TAPPING SLEEVE AND VALVE BONDING

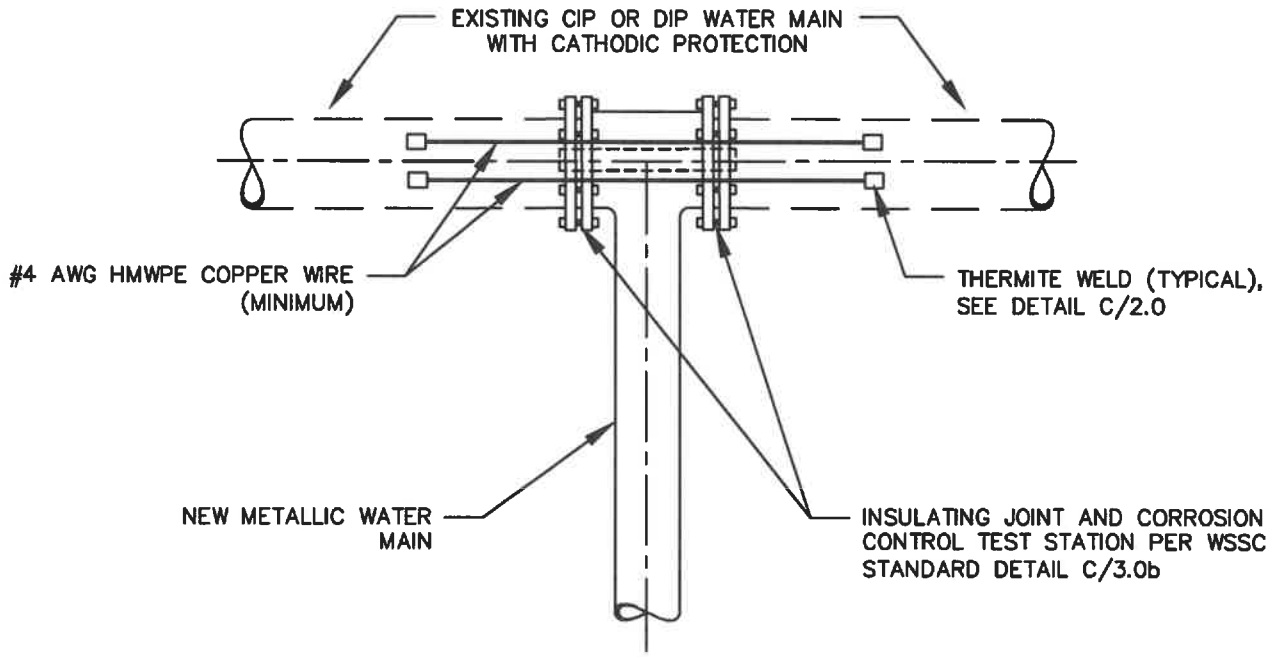


BOLTED CONNECTION

NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. CLEAN VALVE TO BRIGHT METAL AT POINT OF BOLTED CONNECTION.
3. ENSURE BOLT AND WIRE CRIMP ARE FREE OF DIRT AND SCALE TO CREATE PROPER METAL TO METAL CONTACT FOR BONDING.
4. AFTER CONNECTIONS ARE MADE, COAT EXPOSED METAL WITH SCOTCHKOTE OR APPROVED EQUAL.
5. SEE DETAIL C/1.0 FOR JOINT BONDING OF PUSH-ON JOINTS.
6. CRIMPED RING TERMINAL ON BOLTED CONNECTION DEPENDENT ON SIZE OF WIRE.

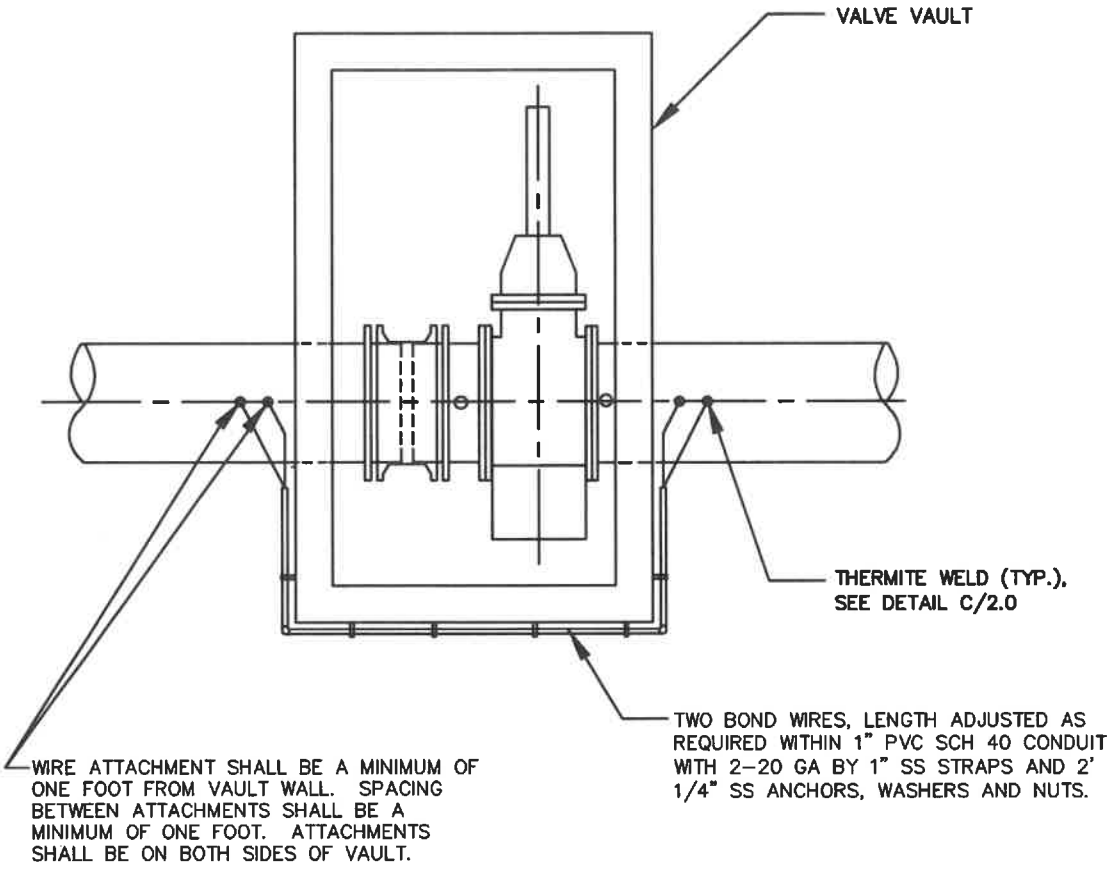
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mitch Harman Chief Engineer	STANDARD DETAIL DUCTILE IRON MECHANICAL JOINT VALVE BONDING	C 1.2



NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. DO NOT INSTALL BOND WIRES BETWEEN NEW AND EXISTING PIPE

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL BONDING OF EXISTING PIPE WITH CATHODIC PROTECTION WHEN CONNECTING TO NEW METALLIC WATER MAINS	C 1.2a



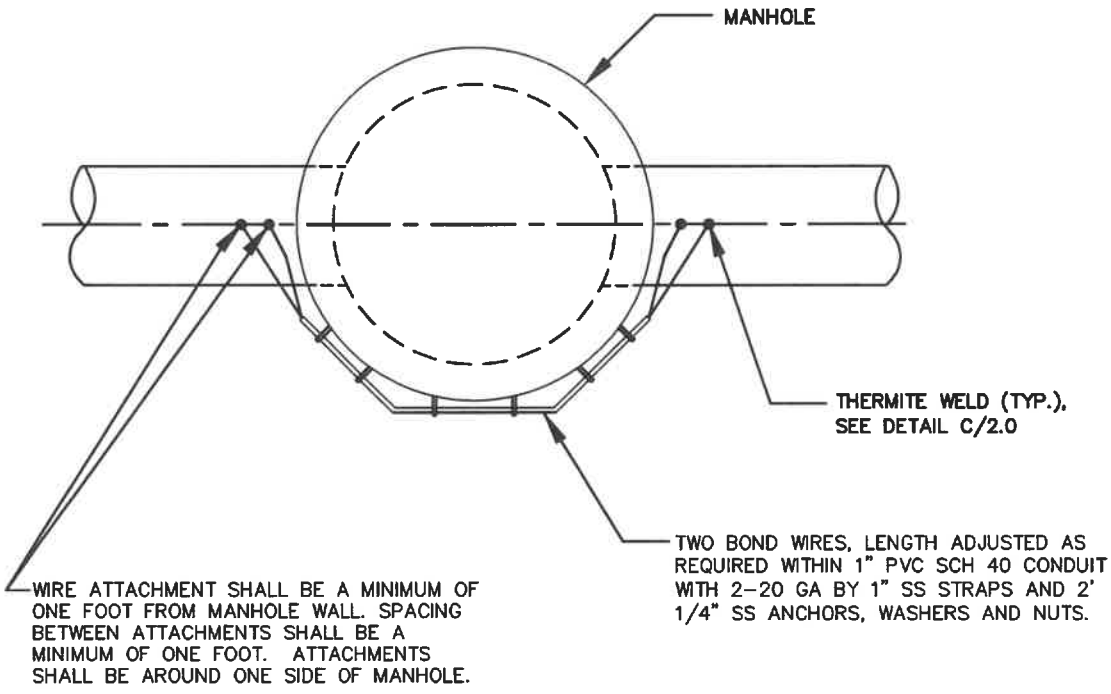
PLAN VIEW

NO SCALE

NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. PROVIDE SLACK IN WIRES AND FASTEN TO VAULT TO PROTECT WIRES FROM DAMAGE.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL DUCTILE IRON PIPE BONDING AROUND VALVE VAULT	C 1.3



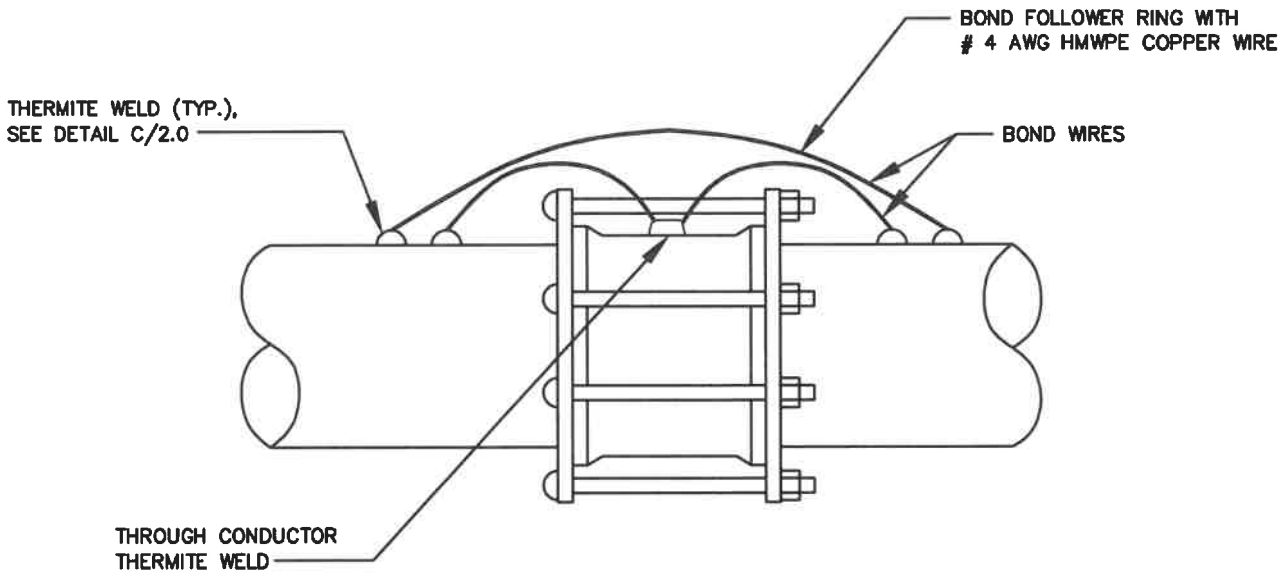
PLAN VIEW

NO SCALE

NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. PROVIDE SLACK IN WIRES AND FASTEN TO MANHOLE TO PROTECT WIRES FROM DAMAGE.
3. FOR USE WHEN WIRES NEED TO BE ROUTED AROUND AIR RELEASE MANHOLES, SEWER MANHOLES, OR OTHER CIRCULAR STRUCTURES.

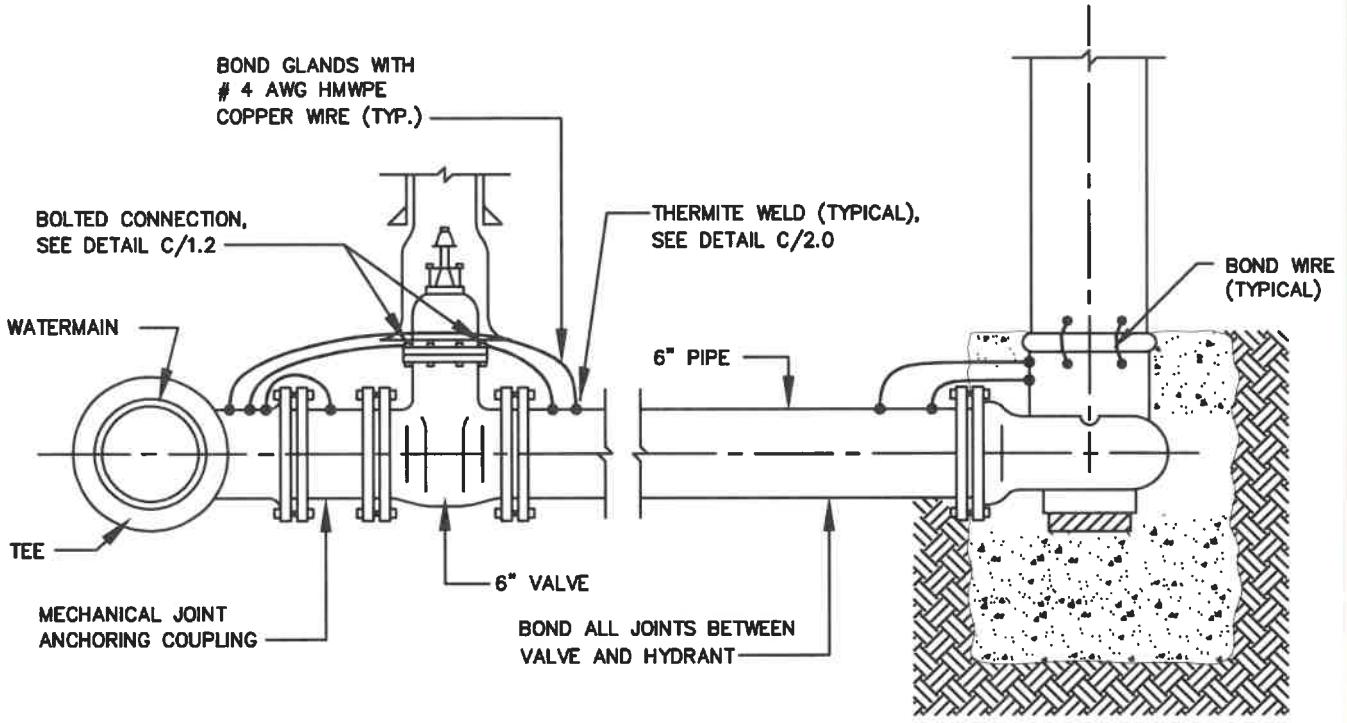
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL DUCTILE IRON PIPE BONDING AROUND MANHOLE	C 1.3a

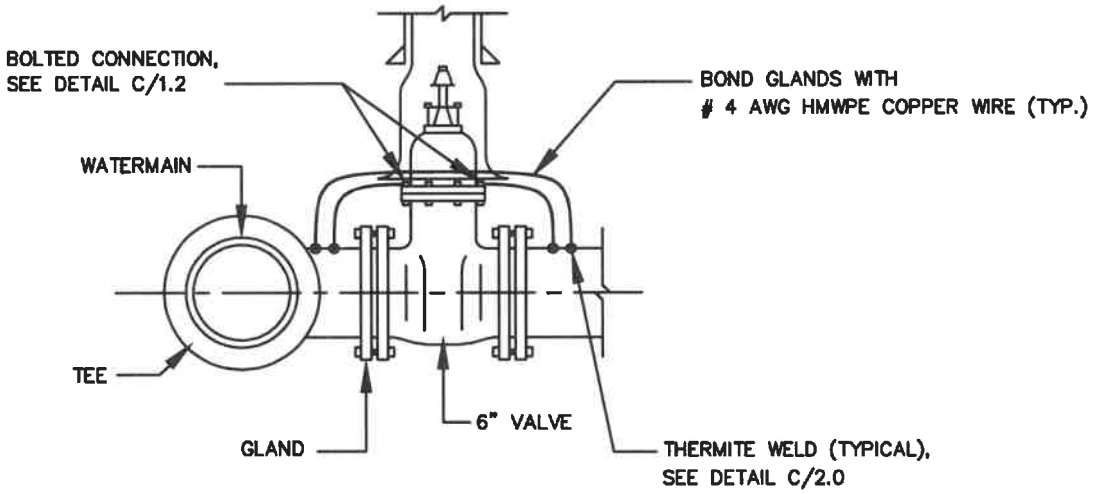


NOTE:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harman Chief Engineer	STANDARD DETAIL MECHANICAL COUPLING JOINT BOND	C 1.4



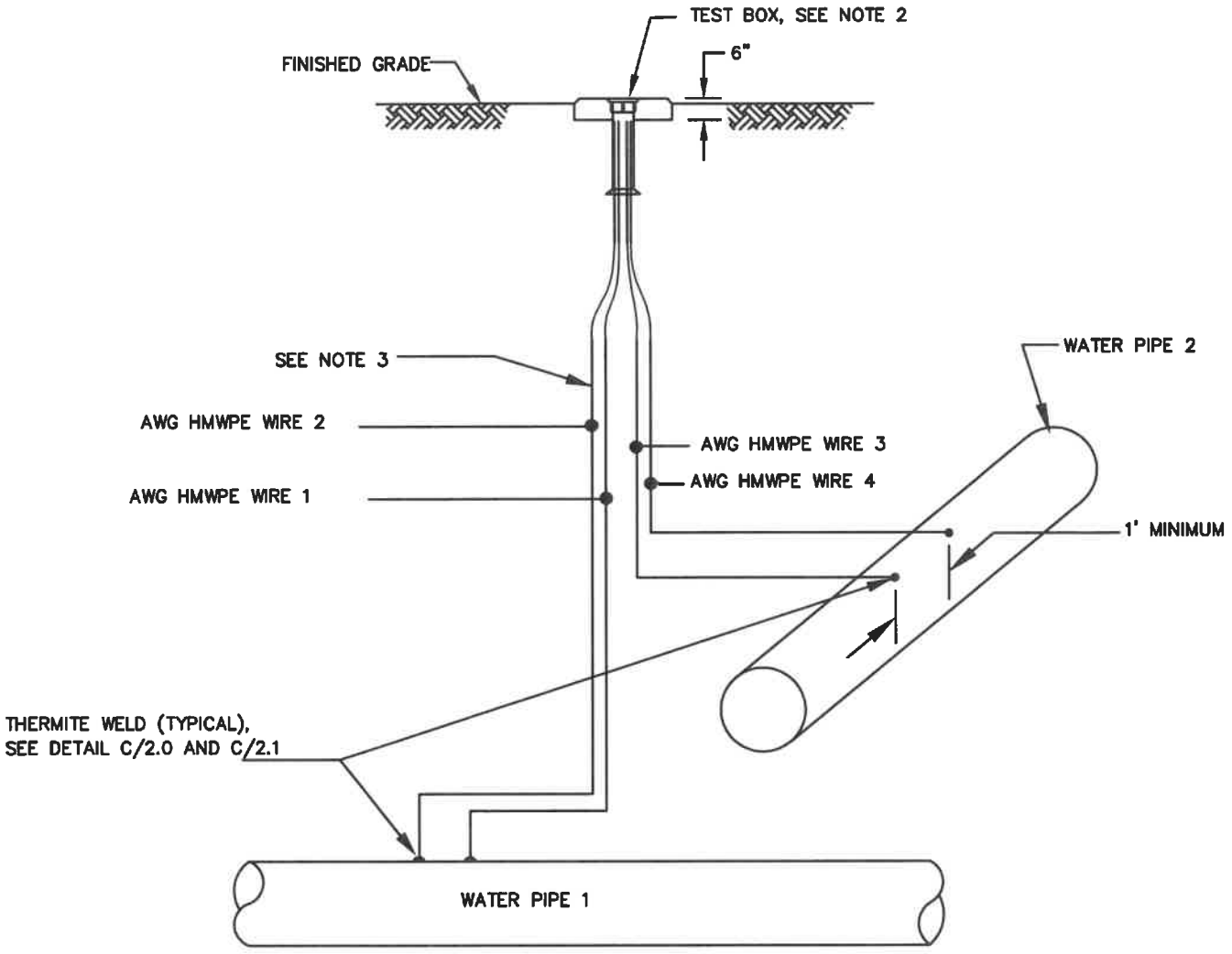


OPTIONAL ANCHORING TEE

NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. SEE DETAIL C/1.0 FOR JOINT BONDING OF PUSH-ON JOINTS.

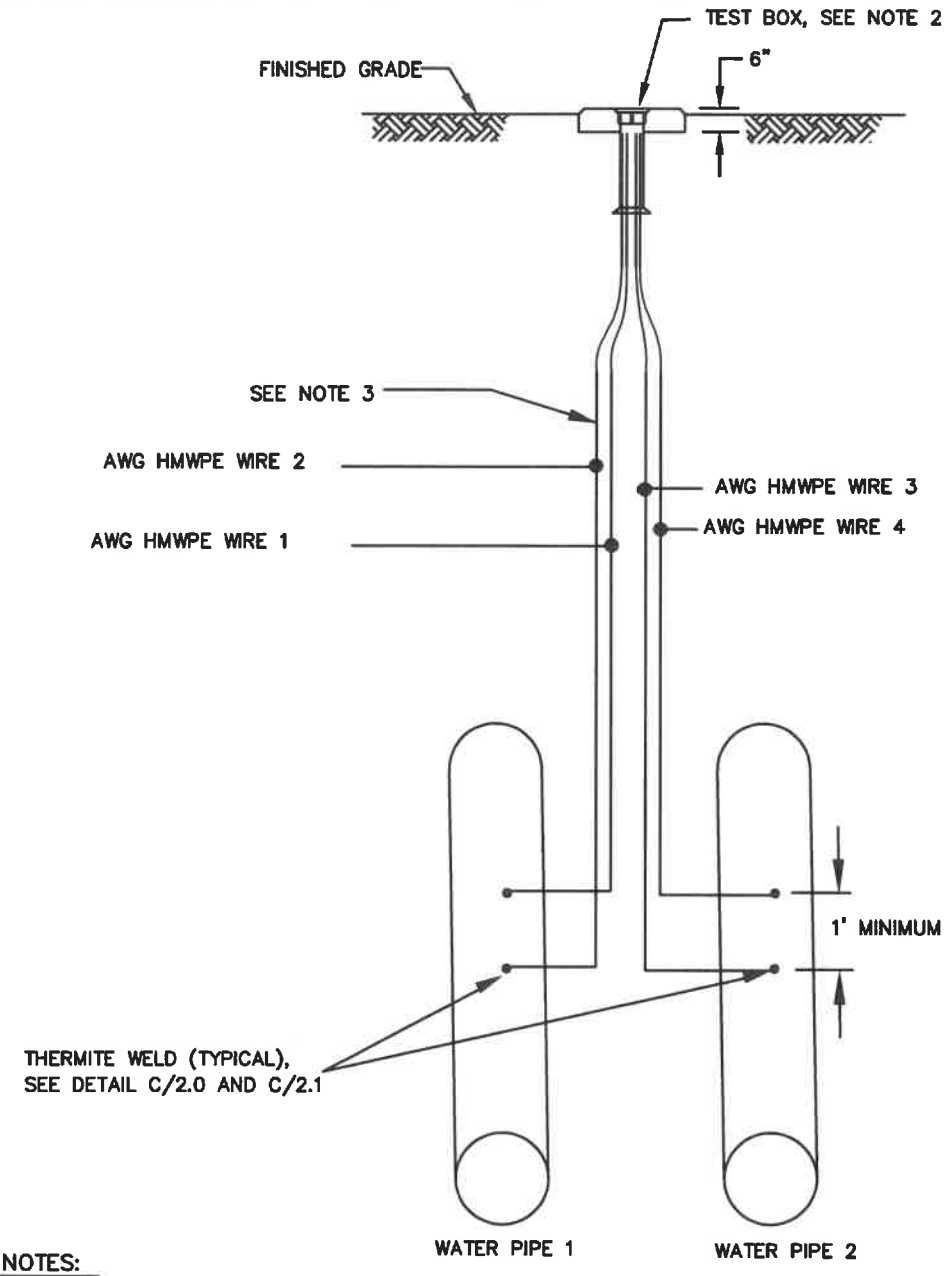
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL FIRE HYDRANT BONDING	C 1.6



NOTES:

1. ALL WIRES SHALL BE HMWPE INSULATION, GAUGE PER TABLE OF DETAIL C/1.0.
2. CONNECT LEADS IN TEST STATION PER DETAIL C/4.0 and C/4.0b. IF MORE THAN TWO PIPELINES ARE BONDED, USE PIPELINE JUNCTION BOX PER STANDARD DETAIL C/1.7b.
3. RUN ALL WIRES IN 2" PVC SCH40 CONDUIT FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY. ALL WIRES SHALL BE OF SUFFICIENT LENGTH TO REACH THE TERMINAL BOARD WITHOUT SPLICING.
4. TYPICAL DETAIL, BONDING OF MORE THAN TWO PIPELINES MAY BE REQUIRED DEPENDING ON PROJECT.
5. FOR BONDING OF PARALLEL PIPELINES SEE DETAIL C1.7a.

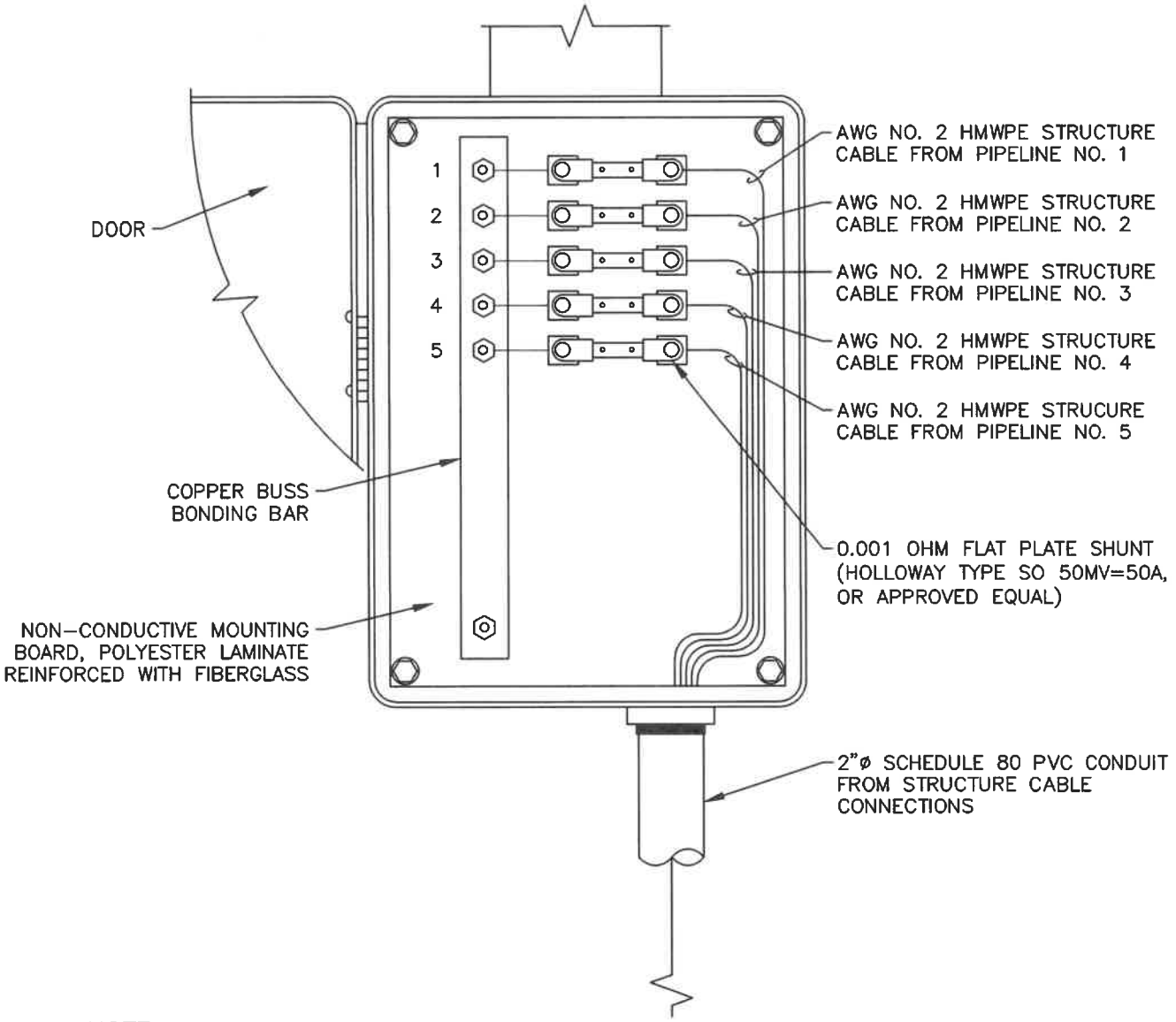
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL ATTACHMENT OF BONDING WIRES FOR CROSSING WATER OR METALLIC SEWER PIPELINES	C 1.7



NOTES:

1. ALL WIRES SHALL BE HMWPE INSULATION, GAUGE PER TABLE OF DETAIL C/1.0.
2. CONNECT LEADS IN TEST STATION PER DETAIL C/4.0 AND C/4.0–b. IF MORE THAN TWO PIPELINES ARE BONDED, USE PIPELINE JUNCTION BOX PER STANDARD DETAIL C1.7b.
3. RUN ALL WIRES IN 2" PVC SCH40 CONDUIT FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY. ALL WIRES SHALL BE OF SUFFICIENT LENGTH LENGTH TO REACH TERMINAL BOARD WITHOUT SPLICING.
4. TYPICAL DETAIL, BONDING OF MORE THAN TWO PIPELINES MAY BE REQUIRED DEPENDING ON PROJECT.
5. FOR BONDING OF CROSSING PIPELINES SEE DETAIL C/1.7

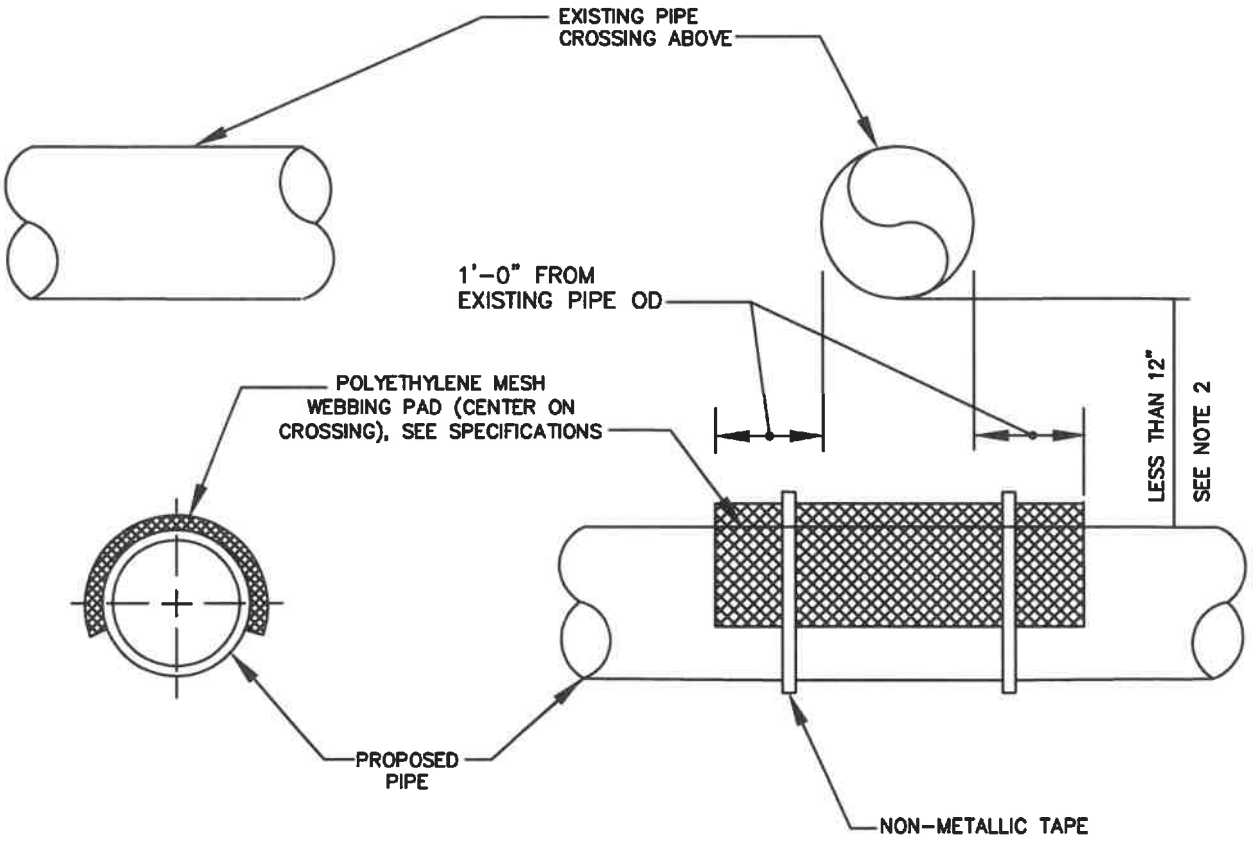
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmen Chief Engineer	STANDARD DETAIL ATTACHMENT OF BONDING WIRES FOR PARALLEL WATER OR METALLIC SEWER PIPELINES	C 1.7a



NOTE:

1. ABOVE IS TYPICAL DEPICTION.
2. NUMBER OF TERMINALS WILL VARY DEPENDING ON PROJECT

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmuth Chief Engineer	STANDARD DETAIL PIPELINE JUNCTION BOX DETAIL (TYPICAL)	C 1.7b



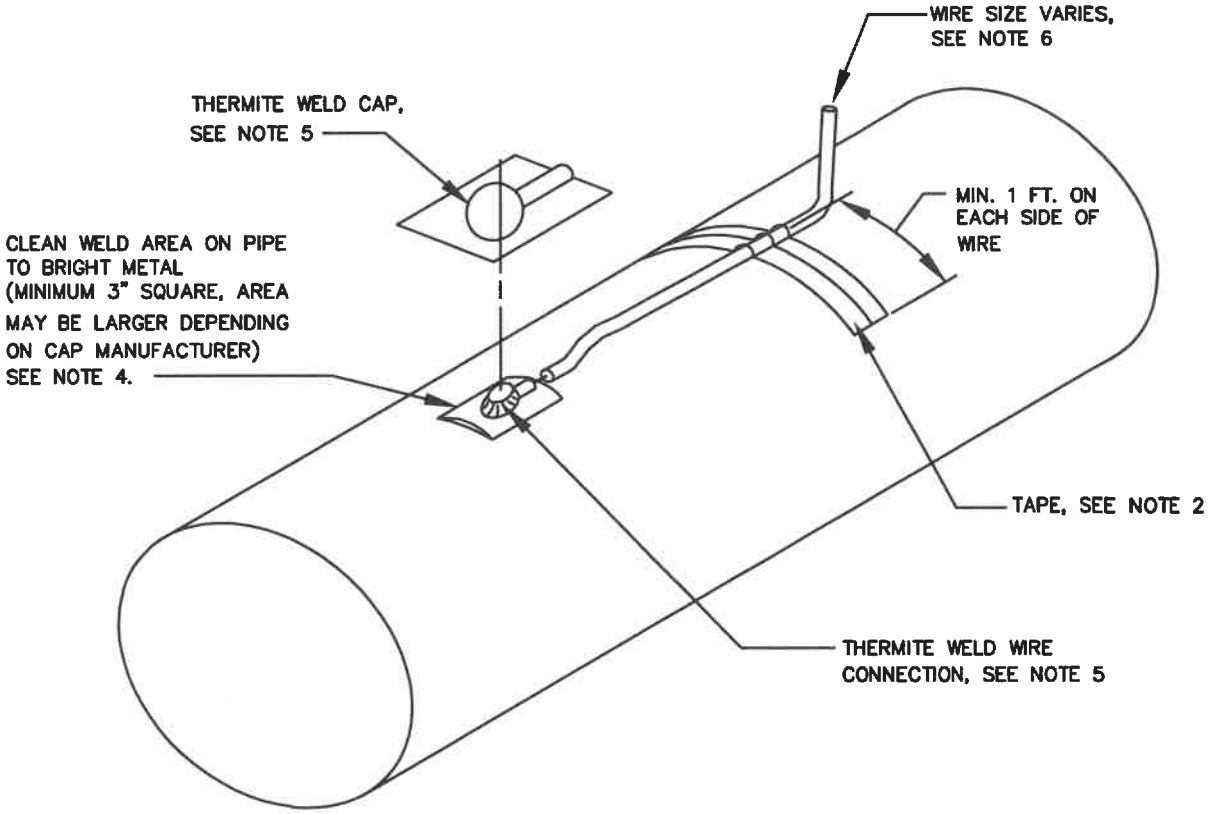
SECTION

PLAN

NOTES:

1. USE ONLY WHEN PIPES ARE LESS THAN 12" APART.
2. PROVIDE SAND CUSHION BETWEEN PIPES, SEE SPECIFICATIONS.

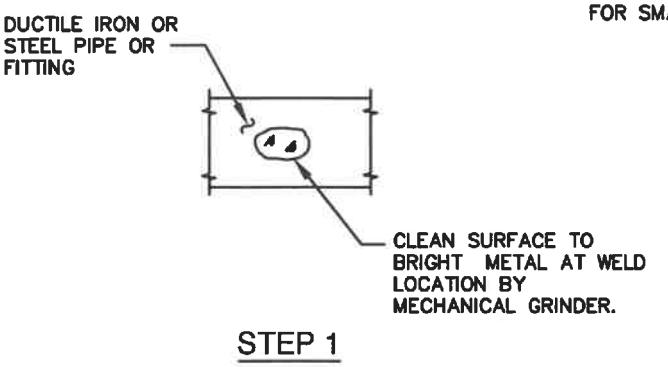
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL SEPARATOR TO AVOID METALLIC CONTACT ON CROSSING PIPES	C 1.9



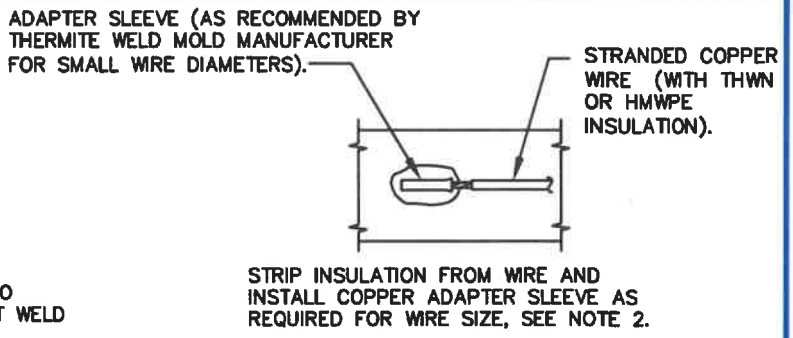
NOTES:

1. FOR DUCTILE IRON, CAST IRON, OR STEEL PIPE, USE CHARGE AND PIPE SIZE AS REQUIRED.
2. SECURE WIRE TO PIPE WITH TAPE OR OTHER APPROVED METHOD WITHOUT DAMAGING PIPE COATING.
3. COVER THERMITE WELD WITH APPROVED CAP PER SPECIFICATIONS
4. COAT ANY EXPOSED BARE WELD AREA PER SPECIFICATIONS.
5. FOR PREPARATION OF PIPE SURFACE AND WELD ATTACHMENT, SEE DETAIL C/2.1.
6. FOR WIRE TYPE AND SIZES SEE DETAIL C/2.2, C/2.5, C/3.0, C/3.0b, C/3.0c, C/3.1, C/3.2, C/3.4, C/4.5, C/4.6 AND C/4.7.

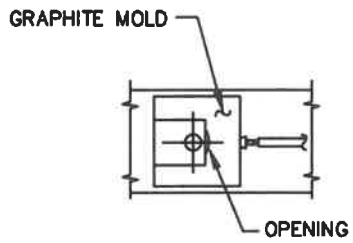
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL THERMITE WELD WIRE CONNECTION	C 2.0



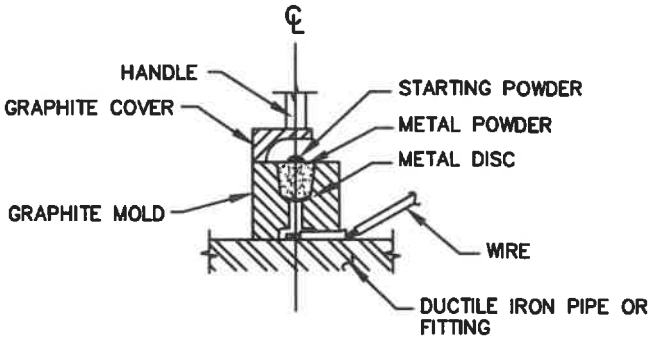
STEP 1



STEP 2



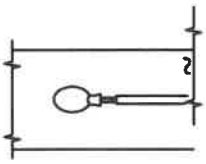
TOP



SIDE

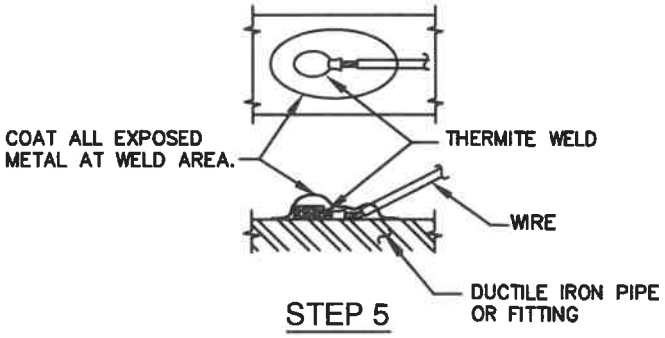
HOLD GRAPHITE MOLD FIRMLY OVER ADAPTER SLEEVE WITH OPENING AWAY FROM OPERATOR – IGNITE STARTING POWDER.

STEP 3



REMOVE SLAG FROM CONNECTION. THOROUGHLY CLEAN WELD AREA.

STEP 4

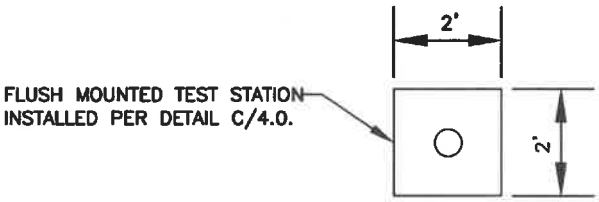


STEP 5

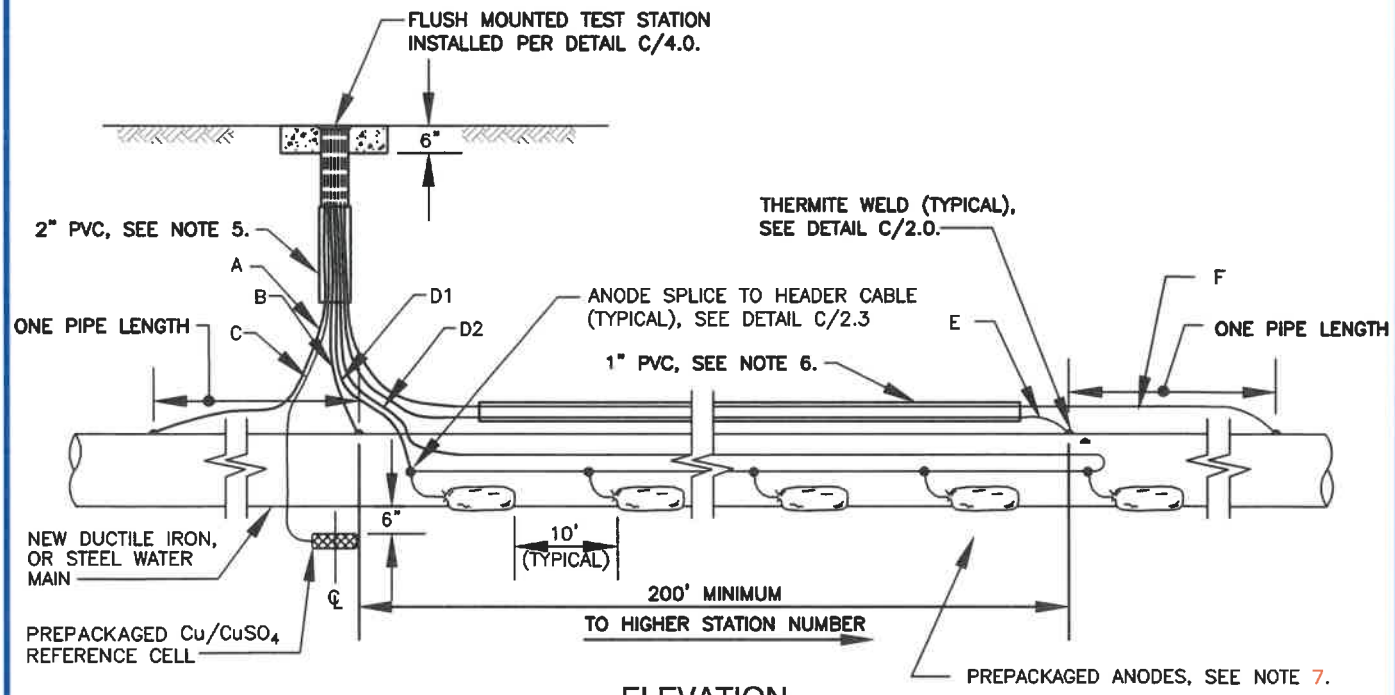
NOTE:

1. THERMITE WELDS SHALL BE COATED WITH A PREFABRICATED ONE PIECE PLASTIC CAP PER SPECIFICATIONS.
2. A COPPER SLEEVE IS REQUIRED FOR THERMITE WELD WIRE CONNECTIONS USING #10 AWG WIRE OR SMALLER.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harman Chief Engineer	STANDARD DETAIL THERMITE WELD DETAIL	C 2.1



PLAN



ELEVATION

NOTES:

1. DO NOT SET TEST STATION IN ROADWAY. PLACE TEST BOX IN NON-PAVED AREA NEXT TO ROADWAY.
2. MAINTAIN SUFFICIENT SLACK IN THE TEST WIRES SO THAT THE WIRES CAN EXTEND A MINIMUM OF 18 INCHES FROM THE TEST BOX.
3. TERMINATE WIRES IN TEST BOX WITH RING TERMINALS, SEE STD. DETAIL C/4.0 FOR TERMINAL BOARD CONFIGURATION.
4. INSTALL 0.01 OHM SHUNT BETWEEN TERMINALS #1 AND #4.
5. RUN ALL WIRES IN 2" PVC SCH. 40 CONDUIT FROM CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY
6. ROUTE LEAD WIRES E AND F IN 1" SCH 40 PVC CONDUIT. TERMINATE CONDUIT AT HORIZONTAL TO VERTICAL TRANSITION WHERE LEADS E AND F JOIN OTHER LEADS TO BE BROUGHT INTO TEST STATION ASSEMBLY.
7. PREPACKAGED ANODES

   FOR DIP AND STEEL WATER MAINS
   PREPACKAGED MAGNESIUM ANODE (TYPICAL), NUMBER AND SIZE AS REQUIRED IN SPECIFICATIONS AND CONTRACT DOCUMENTS.

   FOR CONNECTION NEAR EXIST. PCCP WATER MAINS
   PREPACKAGED ZINC ANODE (TYPICAL), NUMBER AND SIZE AS REQUIRED IN SPECIFICATIONS AND CONTRACT DOCUMENTS.

WIRING SCHEDULE

DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE OF INSULATION	COLOR OF INSULATION
PIPE	A B	1 3	#8 #10	THWN THWN	BLUE BLUE
PERMANENT REFERENCE ELECTRODE	C	6	PER MANUFACTURER	PER MANUFACTURER	PER MANUFACTURER
ANODE HEADER CABLE	D1 D2	4 7	#8 #8	HMWPE HMWPE	BLACK BLACK
PIPE	E F	2 5	#10 #8	THWN THWN	WHITE WHITE

WASHINGTON SUBURBAN SANITARY COMMISSION

APPROVED: 7-26-21

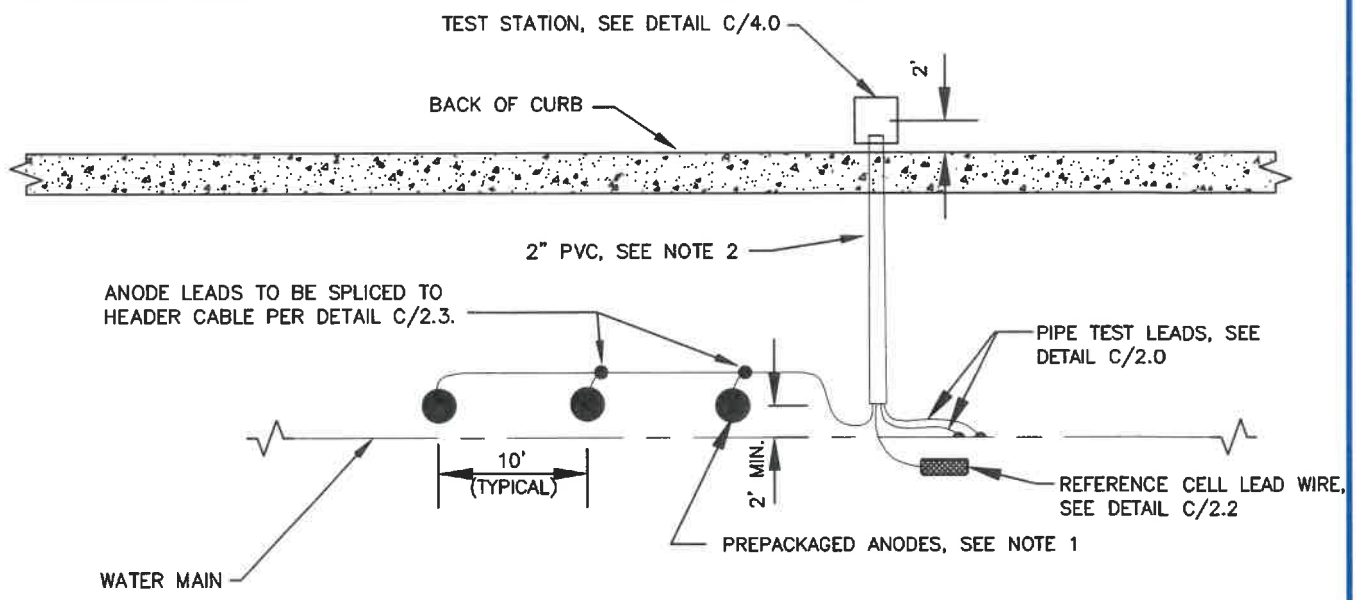
Mike Harmison

Chief Engineer

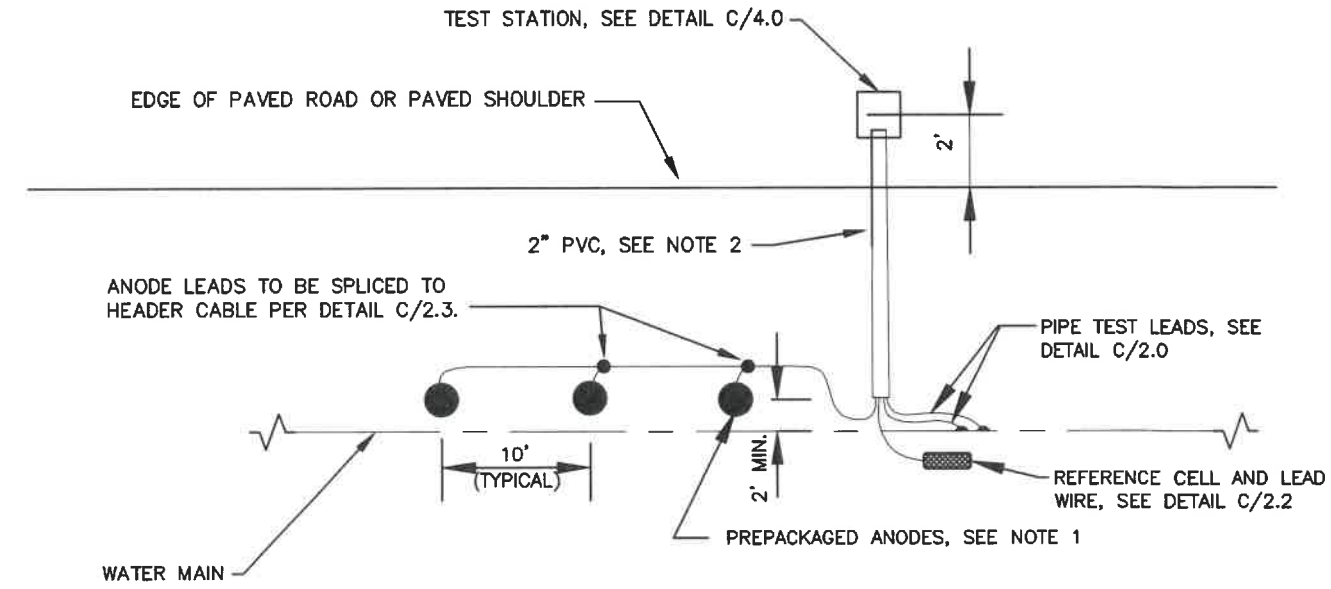
STANDARD DETAIL

SACRIFICIAL ANODE INSTALLATION AND TEST STATION PLACEMENT

C / 2.2



PLAN VIEW - ROADS WITH CURB LINES

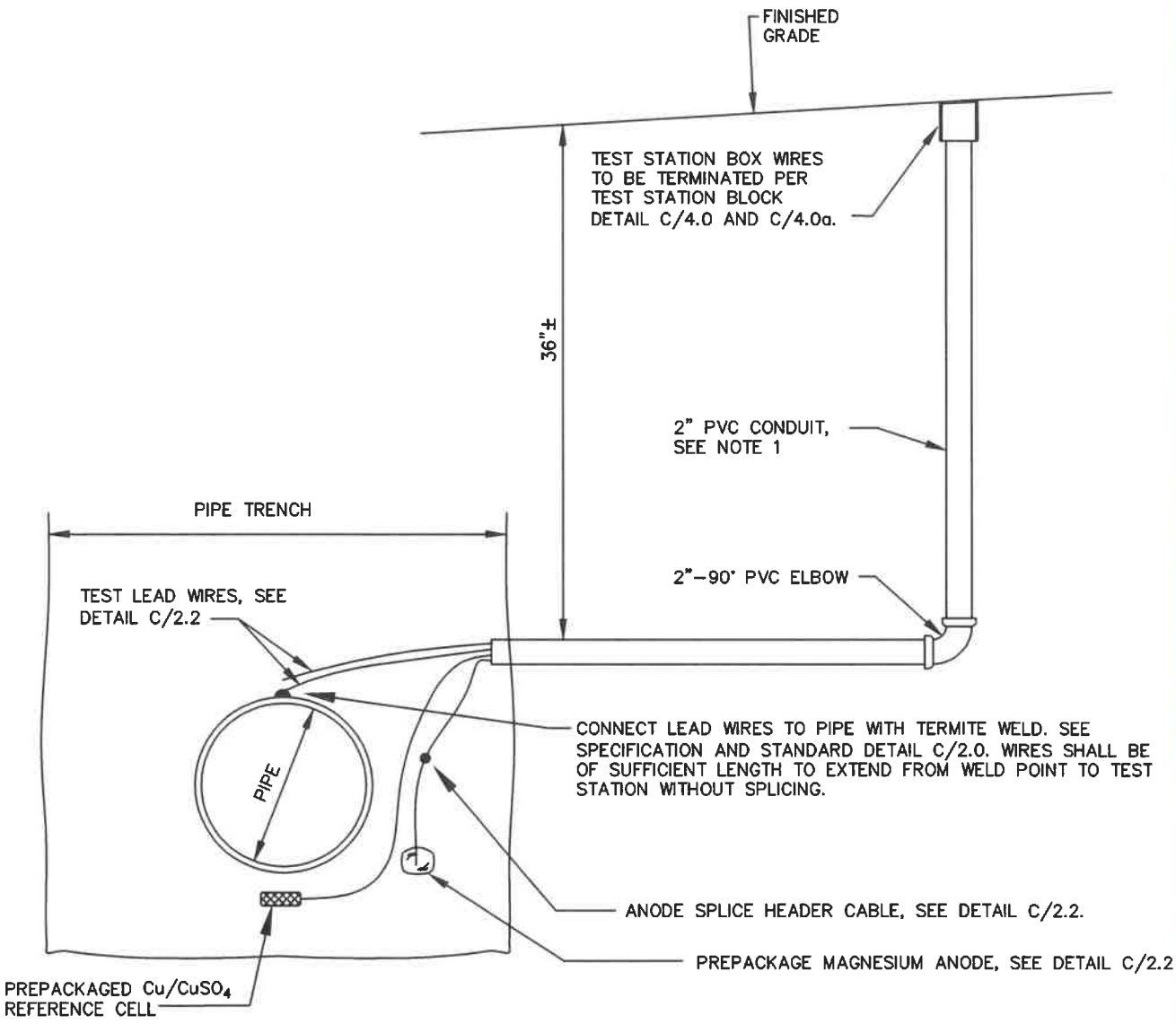


PLAN VIEW - ROADS WITHOUT CURB LINES

NOTES:

1. PREPACKAGED ANODES
   FOR DIP AND STEEL WATER MAINS
   PREPACKAGED MAGNESIUM ANODE (TYPICAL), NUMBER AND SIZE AS REQUIRED IN SPECIFICATIONS AND CONTRACT DOCUMENTS.
   FOR CONNECTION NEAR EXIST. PCCP WATER MAINS
   PREPACKAGED ZINC ANODE (TYPICAL), NUMBER AND SIZE AS REQUIRED IN SPECIFICATIONS AND CONTRACT DOCUMENTS.
2. RUN ALL WIRES IN 2" PVC SCH. 40 CONDUIT, FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF THE TEST STATION ASSEMBLY.
3. FOR PLAN AND ELEVATION, SEE DETAILS C/2.2 AND C/2.2b.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Hoover Chief Engineer	STANDARD DETAIL PLAN VIEW OF SACRIFICIAL ANODE INSTALLATION AND TEST STATION PLACEMENT	C 2.2a

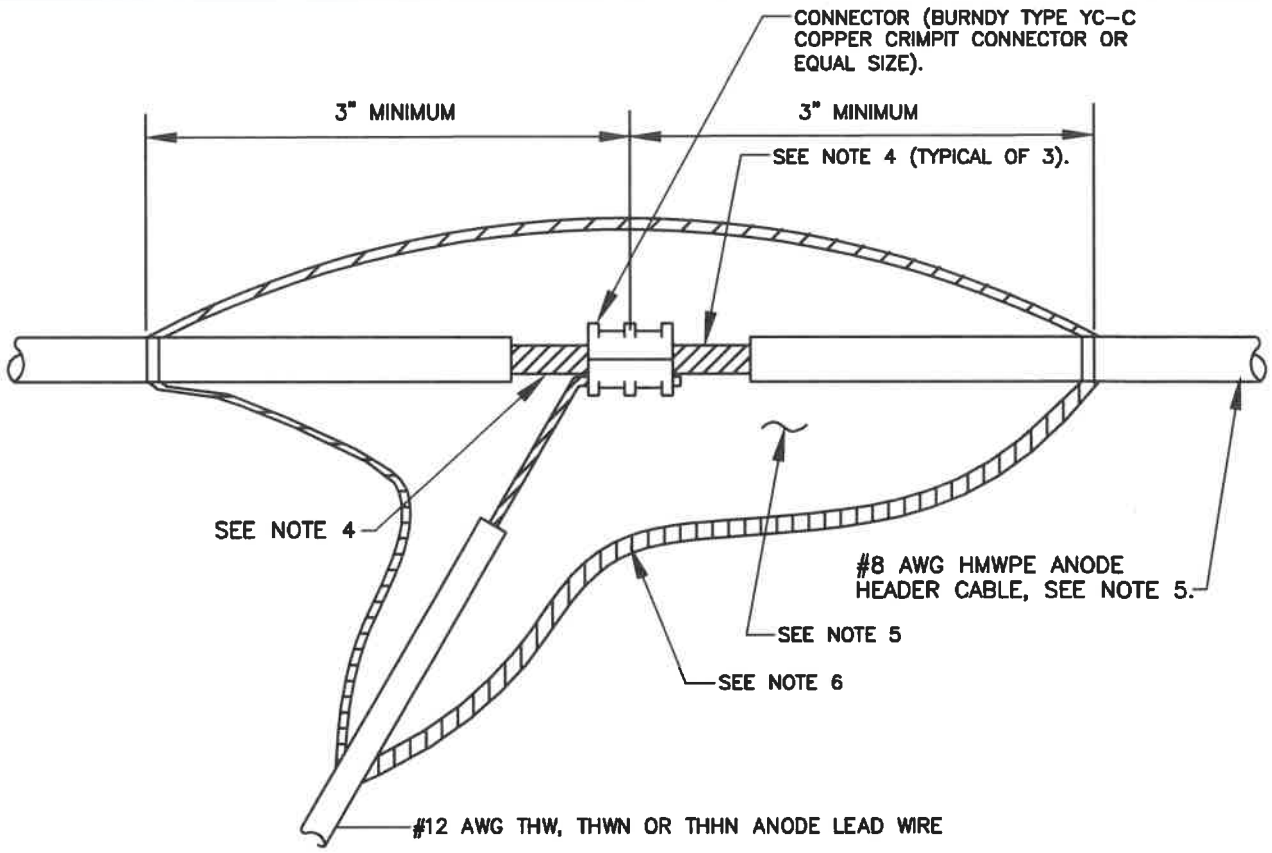


SECTION

NOTES:

1. DO NOT SET TEST STATION IN ROADWAY. PLACE TEST BOX IN NON–PAVED AREA NEXT TO ROADWAY.
2. RUN ALL WIRES IN 2" PVC SCH. 40 CONDUIT FROM CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.
3. FOR WIRE TYPE AND SIZES, SEE DETAIL C/2.2.
4. FOR PLAN AND ELEVATION VIEWS, SEE DETAIL C/2.0 AND C/2.2a.
5. FOR WIRE TYPE AND SIZES SEE DETAIL C/2.2, C/2.5, C/3.0, C/3.0b, C/3.0c, C/3.1, C/3.2, C/3.4, C/4.5, C/4.6 AND C/4.7.

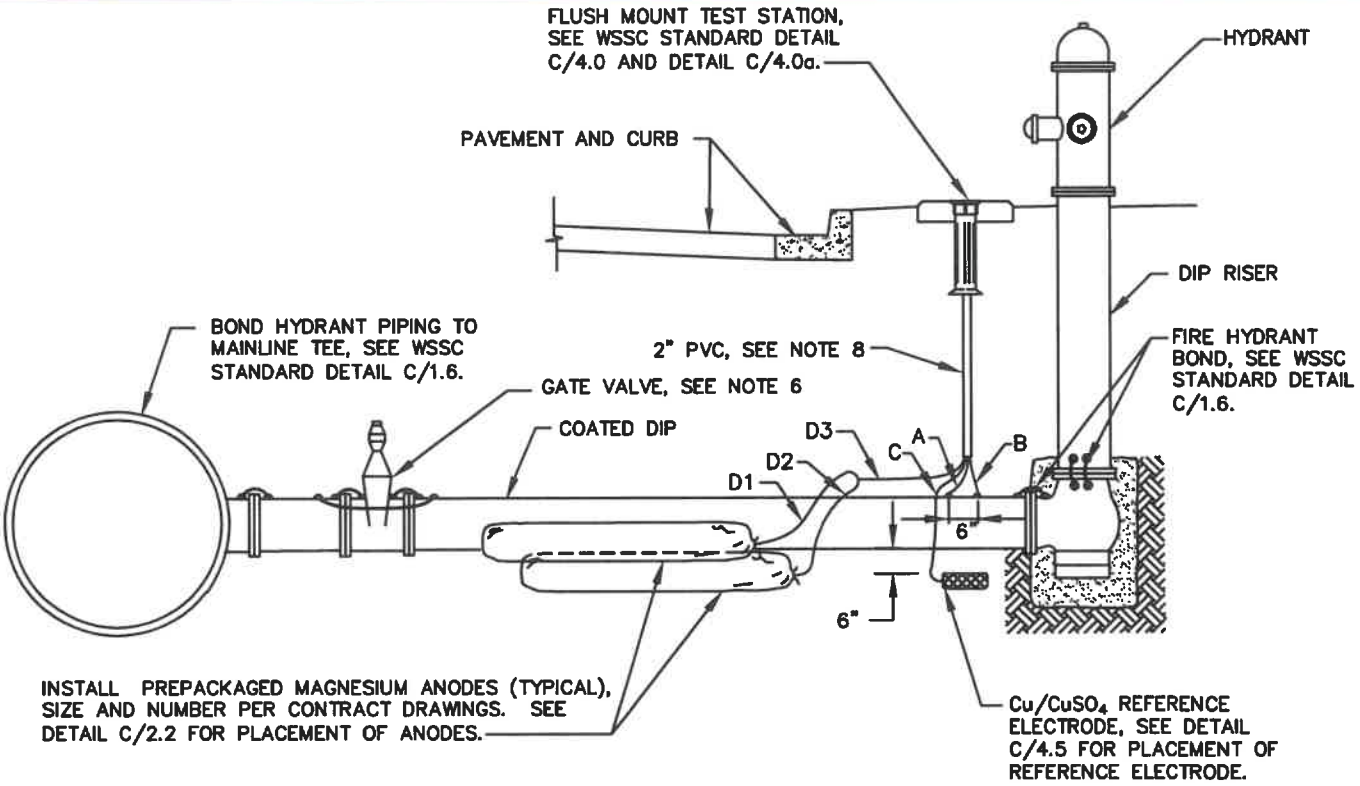
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmuer Chief Engineer	STANDARD DETAIL TYPICAL TEST STATION INSTALLATION	C 2.2b



SPLICE TAPING NOTES:

1. CUT ANODE LEAD WIRE TO PROPER LENGTH PRIOR TO REMOVING INSULATION.
2. REMOVE INSULATION IN ACCORDANCE WITH SPLICE DETAIL. ON WIRES HAVING A JACKET OVER INSULATION, REMOVE JACKET FOR 1/2 INCH FROM END OF INSULATION.
3. MAINTAIN CLEANLINESS OF STRIPPED WIRE AND ATTACH PRESSURE CONNECTOR, USING EQUIPMENT AS SPECIFIED BY THE CONNECTOR'S MANUFACTURER.
4. COAT CONNECTOR AND BARE WIRE SURFACES, INCLUDING ONE INCH OF ADJACENT INSULATION ON EACH WIRE, WITH SCOTCHKOTE FAST DRYING SEALANT AND ALLOW TO DRY UNTIL TACKY.
5. SPIRAL WRAP THREE HALF-LAPPED LAYERS OF 3/4-INCH WIDE SCOTCH LINERLESS RUBBER SPLICING TAPE 130C OR APPROVED EQUAL.
6. SPIRAL WRAP THREE HALF-LAPPED LAYERS OF 3/4-INCH WIDE SCOTCH VINYL ELECTRICAL TAPE SUPER 88 OR APPROVED EQUAL.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mitch Harmuse Chief Engineer	STANDARD DETAIL SPLICE DETAIL ANODE LEADER TO HEADER CABLE	C 2.3

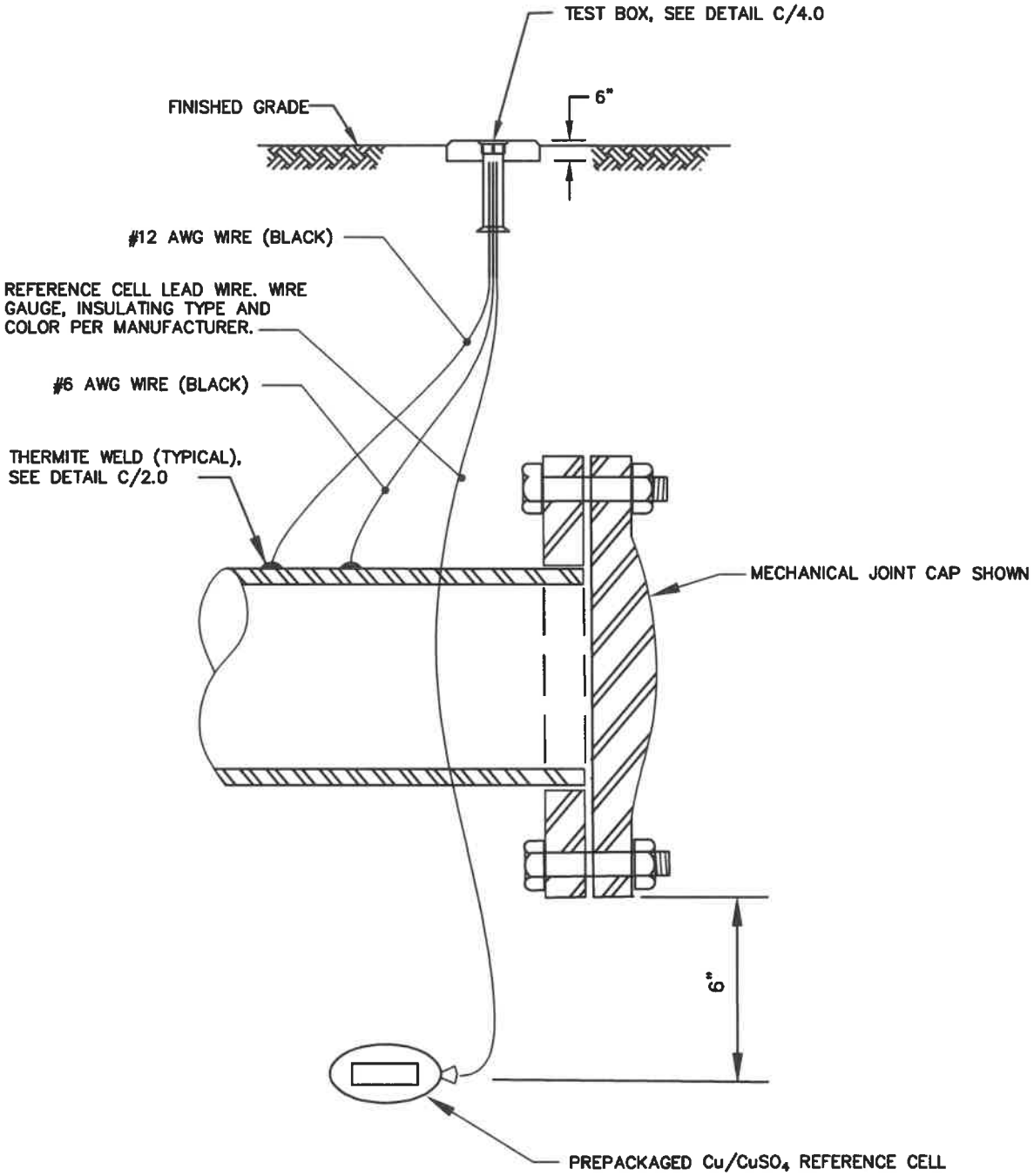


WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE OF INSULATION	COLOR OF INSULATION
NEW WATER MAIN	A B	1 3	#12 #6	THWN THWN	BLACK BLACK
PERMANENT REFERENCE ELECTRODE	C	6	PER MANUFACTURER	PER MANUFACTURER	PER MANUFACTURER
PREPACKAGED MAGNESIUM ANODE LEAD	D1 D2	N/A	#12 #12	THW, THWN OR THHN	WHITE WHITE
MAGNESIUM ANODE HEADER CABLE	D3	4	#8	HMWPE	BLACK

NOTES:

1. INSTALL 0.01 OHM SHUNT BETWEEN TERMINALS #1 AND #4.
2. MAINTAIN SUFFICIENT SLACK IN THE TEST WIRES SO THAT THE WIRES CAN EXTEND A MINIMUM OF 18 INCHES FROM THE TEST BOX.
3. BOND ALL DUCTILE IRON COMPONENTS TOGETHER WITH AWG NO. 6 HMWPE WIRES.
4. INSTALL BOND WIRES ON TOP OF PIPE OR FITTING WHERE POSSIBLE.
5. INSTALL A MINIMUM OF TWO BOND CABLES ACROSS EACH PIPE JOINT.
6. SEE WSSC STANDARD DETAIL C/1.2 FOR BONDING OF VALVE.
7. INSTALL BOND CABLES ON HYDRANT RISER PIPE AND ELBOW BEFORE INSTALLING FIRE HYDRANT.
8. RUN ALL WIRES IN 2" PVC SCH. 40 CONDUIT FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.

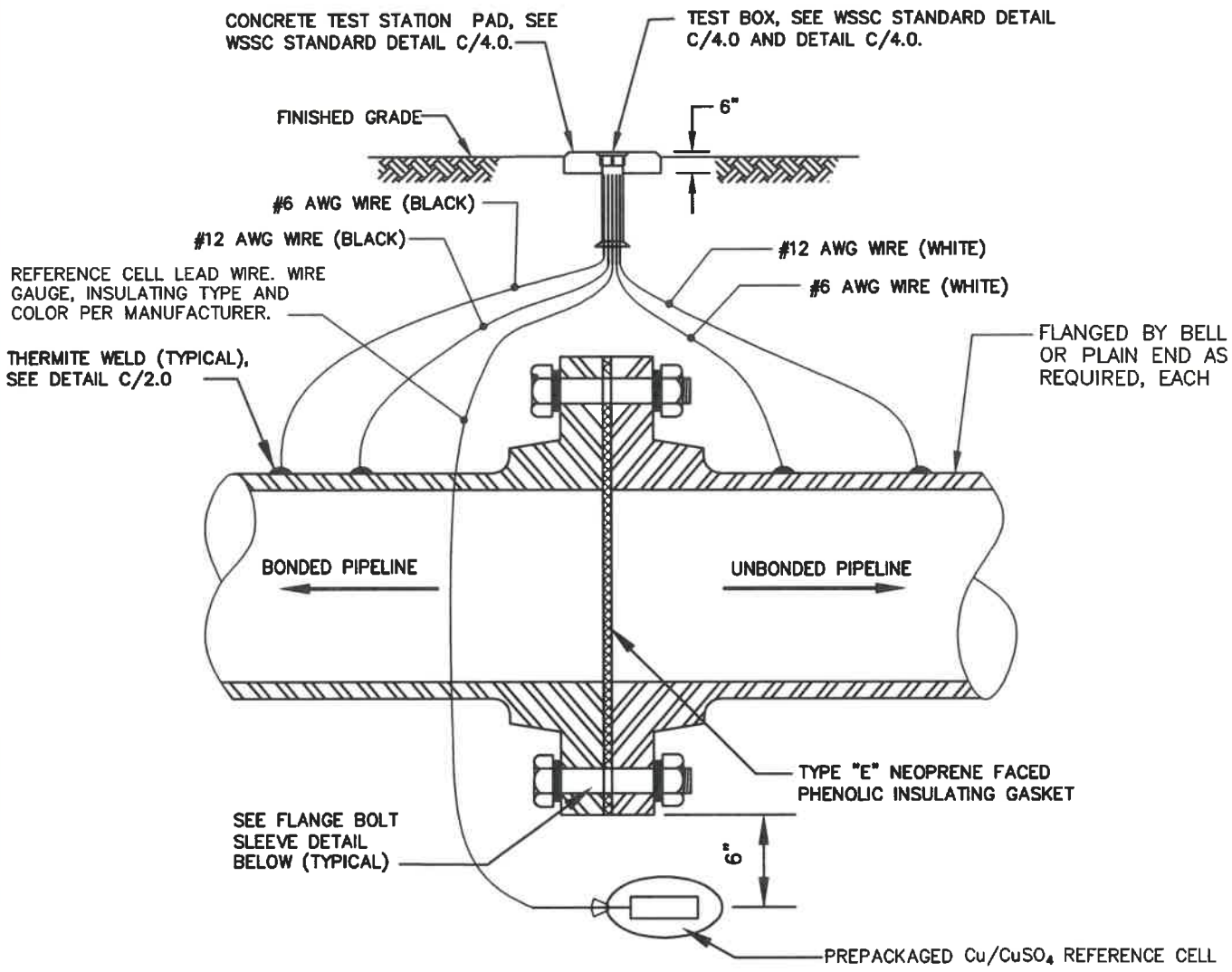
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL HYDRANT TEST STATION (TYPE C)	C 2.5

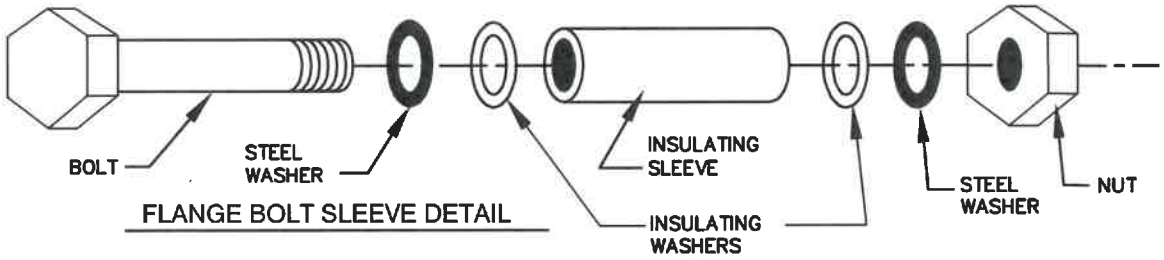


NOTES:

1. THE TEST LEAD WIRES SHALL BE STRANDED COPPER AWG WIRE WITH TW, THW, OR THWN INSULATION. WIRE SIZE AND COLOR SHALL BE AS SHOWN.
2. RUN ALL WIRES IN 2" PVC SCH. 40 FROM THE CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harman Chief Engineer	STANDARD DETAIL TEST STATION AT MECHANICAL JOINT / PUSH-ON CAP / PLUG	C 2.6



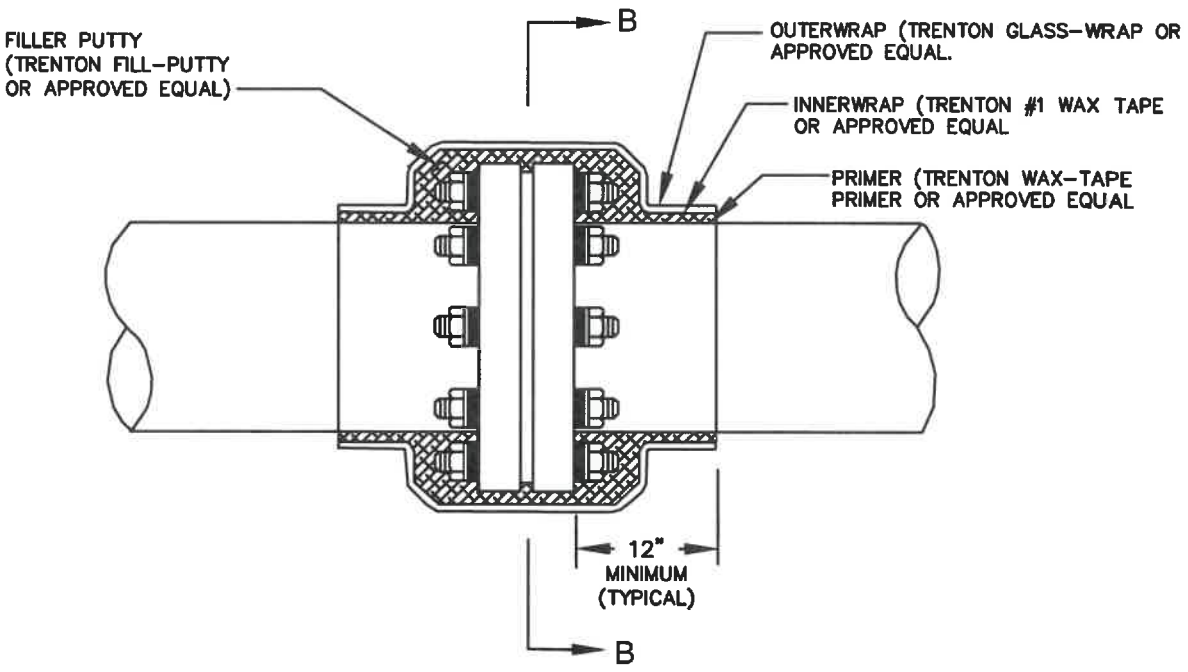


FLANGE BOLT SLEEVE DETAIL

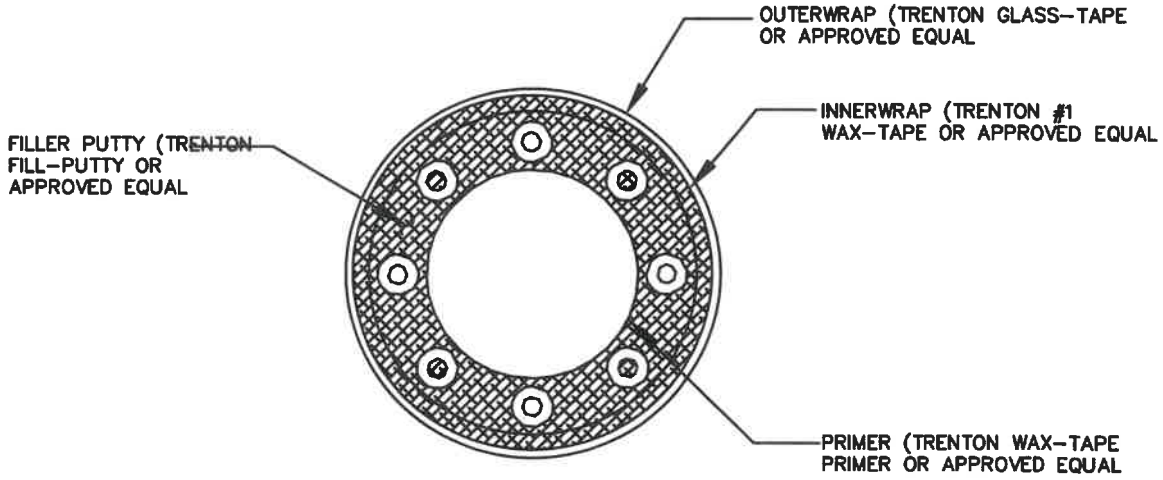
NOTES:

1. TEST LEADS SHALL BE STRANDED COPPER WIRE WITH TW, THW OR THWN.
2. AFTER INSTALLATION AND ASSEMBLY, TEST INSULATING JOINT
3. FOR COATING OF INSULATING JOINT, SEE DETAIL C/3.0a.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mitch Harman Chief Engineer	STANDARD DETAIL INSULATED FLANGE JOINT DETAIL	C 3.0



SIDE VIEW

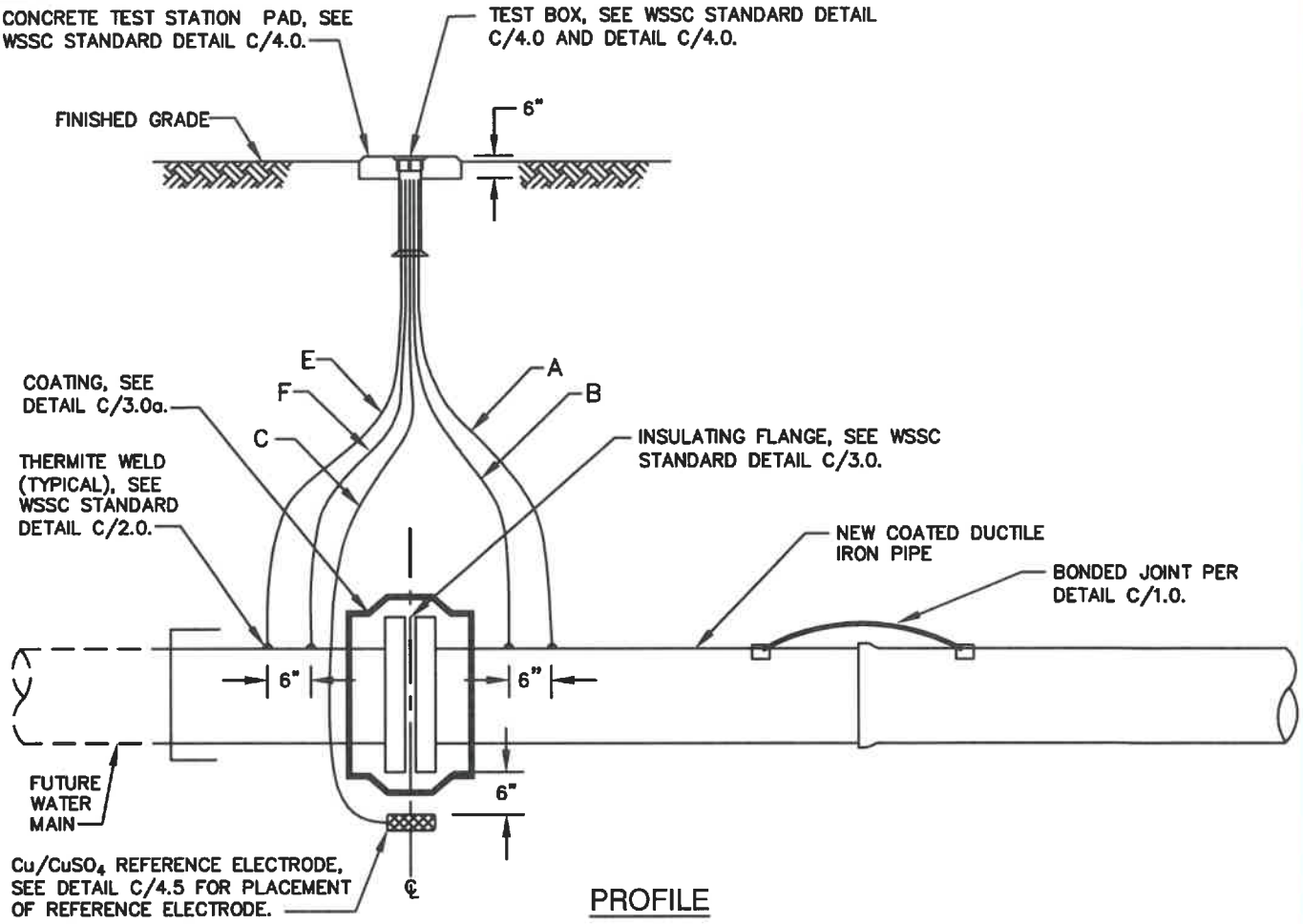


SECTION VIEW "B-B"

NOTE:

SEE SPECIFICATIONS FOR THE PUTTY, OUTER AND INNER WRAP.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL COATING OF INSULATING FLANGE DETAIL	C 3.0a



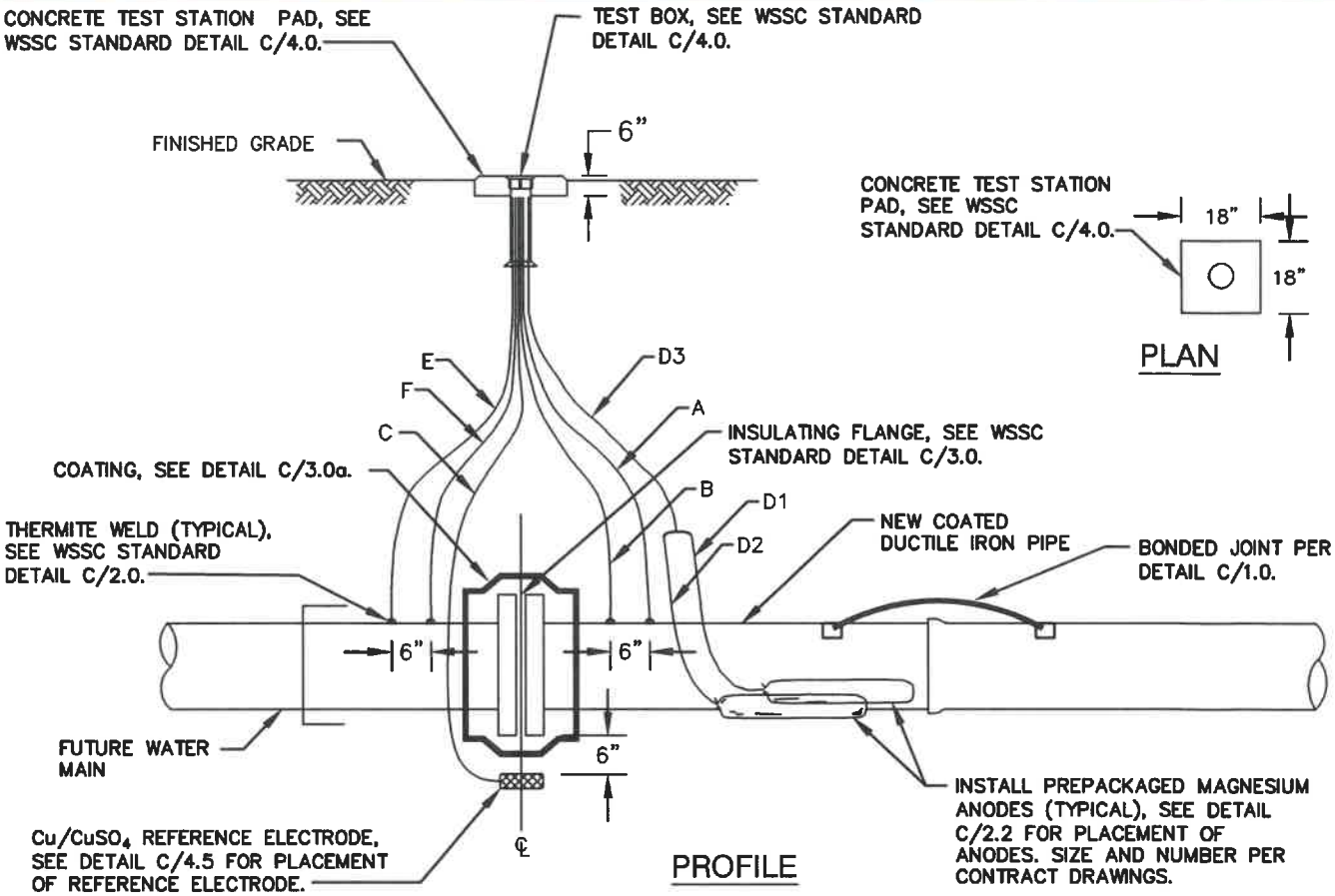
PROFILE

WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE OF INSULATION	COLOR OF INSULATION
NEW WATER MAIN	A B	1 3	#12 #6	THWN THWN	BLACK BLACK
PERMANENT REFERENCE ELECTRODE	C	6	PER MANUFACTURER	PER MANUFACTURER	PER MANUFACTURER
EXISTING PIPE	E F	2 5	#12 #6	THWN THWN	WHITE WHITE

NOTES:

1. DO NOT SET TEST STATION IN ROADWAY. PLACE TEST BOX IN NON-PAVED AREA NEXT TO ROADWAY. TWO FEET BEHIND THE CURB IF POSSIBLE. ROUTE ALL WIRES TO FINAL TEST BOX LOCATION.
2. MAINTAIN SUFFICIENT SLACK IN THE TEST WIRES SO THAT THE WIRES CAN EXTEND A MINIMUM OF 18 INCHES FROM THE TEST BOX.
3. RUN ALL WIRES IN 2" PVC SCH40 CONDUIT FROM THE CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 2-26-21 Chief Engineer	STANDARD DETAIL INSULATING FLANGE TEST STATION (IJ)	C 3.0b



WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE OF INSULATION	COLOR OF INSULATION
NEW WATER MAIN	A B	1 3	#12 #6	THWN THWN	BLACK BLACK
PERMANENT REFERENCE ELECTRODE	C	6	PER MANUFACTURER	PER MANUFACTURER	PER MANUFACTURER
PREPACKAGED MAGNESIUM ANODE LEAD	D1 D2	N/A	#12 #12	THW, THWN OR THHN	WHITE WHITE
EXISTING PIPE	E F	2 5	#12 #6	THWN THWN	WHITE WHITE
MAGNESIUM ANODE HEADER CABLE	D3	4	#8	HMWPE	BLACK

NOTES

1. INSTALL 0.01 OHM SHUNT BETWEEN TERMINALS #1 AND #4.
2. RUN ALL WIRES ABOVE, TEST LEAD WIRES SHALL MEET REQUIREMENTS OF DETAIL C/3.0.
3. RUN ALL WIRES IN 2" PVC SCH. 40 CONDUIT FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF THE TEST STATION ASSEMBLY.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL INSULATING FLANGE TEST STATION WITH ANODES (IJ)	C 3.0c

WASHINGTON SUBURBAN SANITARY COMMISSION

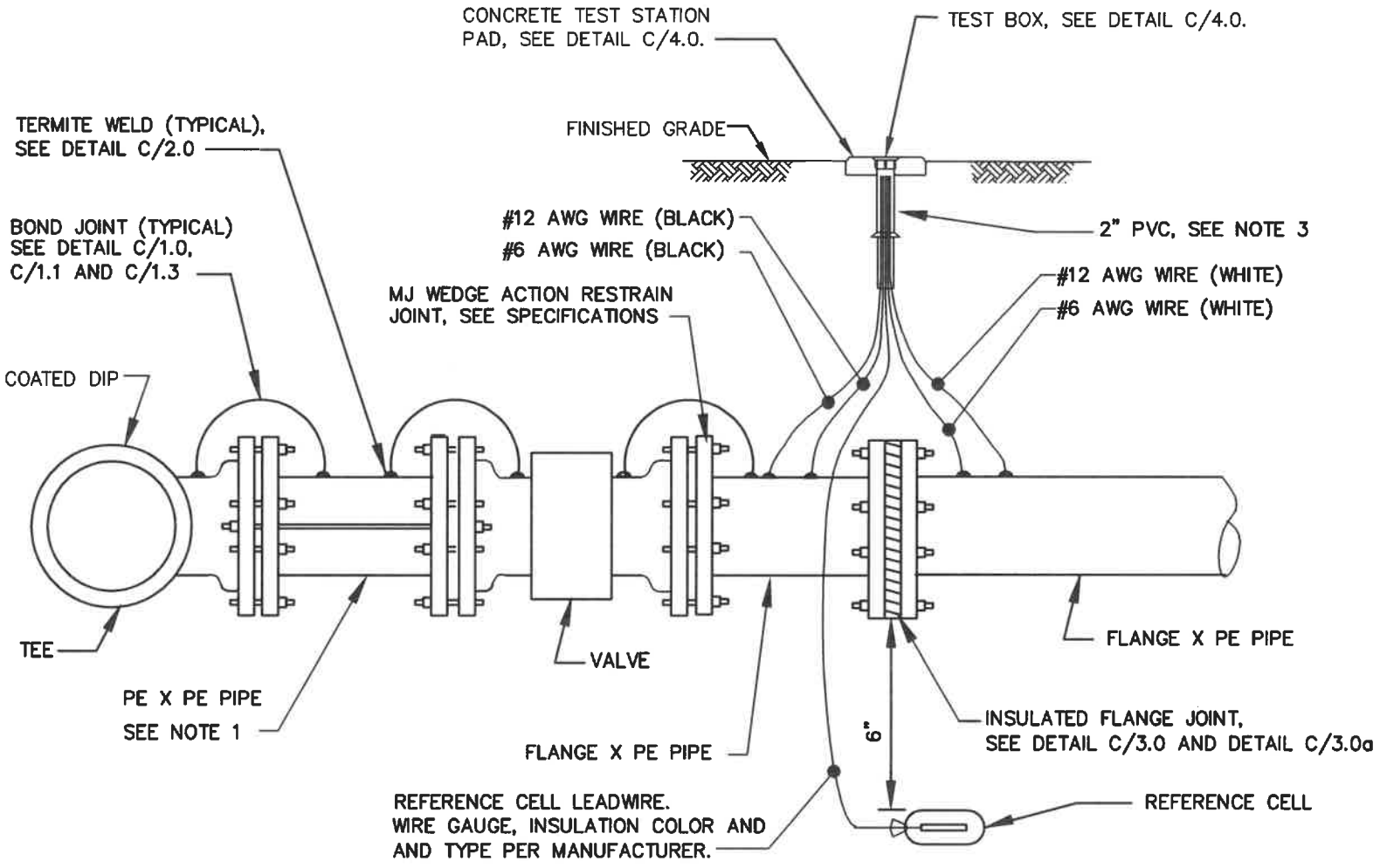
APPROVED: 7-26-21

Chief Engineer

STANDARD DETAIL

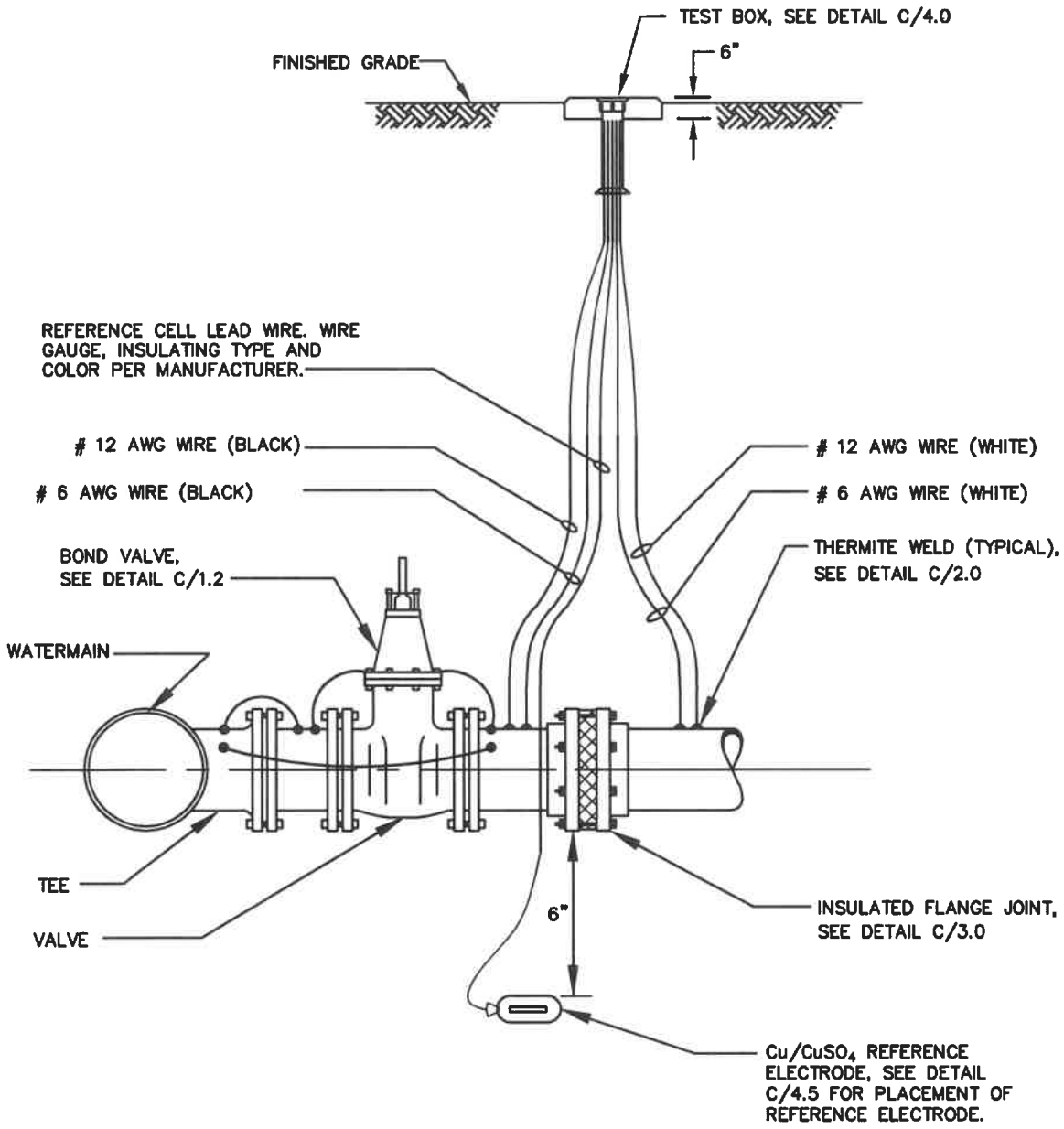
VALVE TO MAIN INSULATED FLANGE JOINT (RESTRAINED)

C/3.1



NOTES:

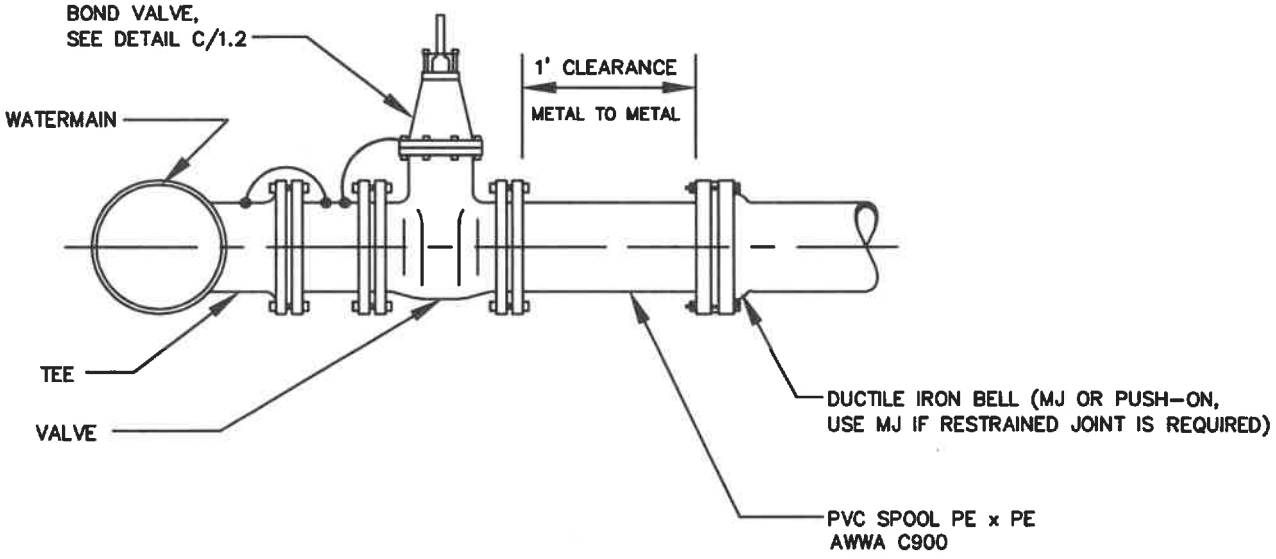
1. SEE DETAIL B/2.0 FOR DETAILS ON STRAPPING JOINTS.
2. FOR TEST LEAD WIRE REQUIREMENTS, SEE DETAIL C/3.0 AND NOTE 1.
3. RUN ALL WIRES IN 2" PVC SCH 40 CONDUIT FROM CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.



NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION REQUIREMENTS.
2. FOR TEST LEAD WIRE REQUIREMENTS, SEE DETAIL C/3.0 AND NOTE 1.
3. RUN ALL WIRES IN 2" PVC SCH40 CONDUIT FROM THE CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.

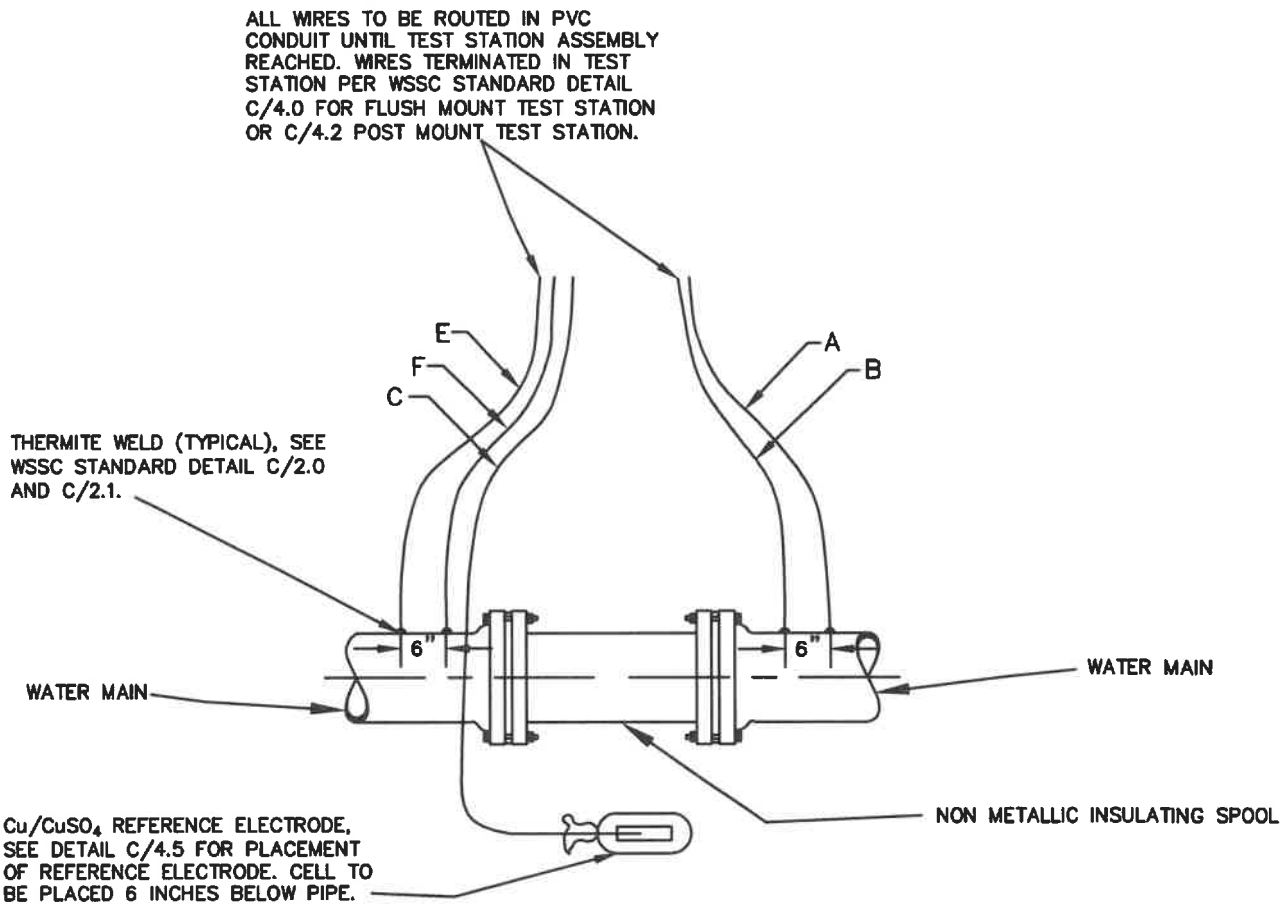
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Hartman Chief Engineer	STANDARD DETAIL VALVE TO MAIN INSULATED FLANGE JOINT (UNRESTRAINED)	C 3.2



NOTES:

1. SEE DETAIL C/1.0 FOR BOND WIRE SIZE AND INSULATION.
2. RESTRAIN VALVE TO MAINLINE TEE. SEE BLOCKING NOTES ON DRAWINGS FOR OTHER BLOCKING OR RESTRAINED JOINT REQUIREMENTS.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL PVC INSULATING SPOOL FOR BRANCH LINES 12-INCH AND SMALLER	C 3.2a



WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE OF INSULATION	COLOR OF INSULATION
MAIN ON LEFT SIDE OF SPOOL	A B	1 3	#12 #6	THWN THWN	BLACK BLACK
PERMANENT REFERENCE ELECTRODE	C	6	PER MANUFACTURER	PER MANUFACTURER	PER MANUFACTURER
MAIN ON RIGHT SIDE OF SPOOL	E F	2 5	#12 #6	THWN THWN	WHITE WHITE

WASHINGTON SUBURBAN SANITARY COMMISSION

APPROVED: 7-26-21

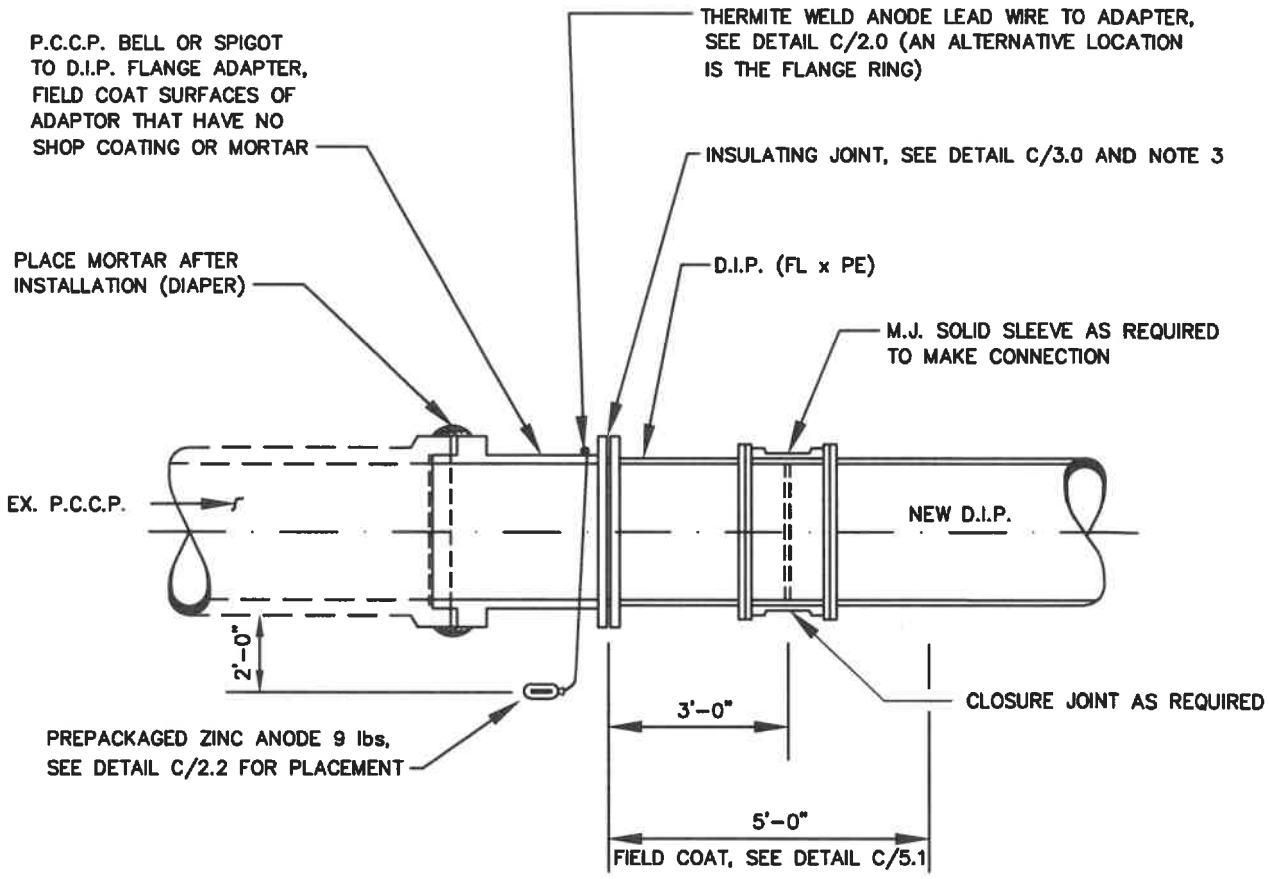
Mike Harmuc

Chief Engineer

STANDARD DETAIL

INSULATING SPOOL

C / 3.2b

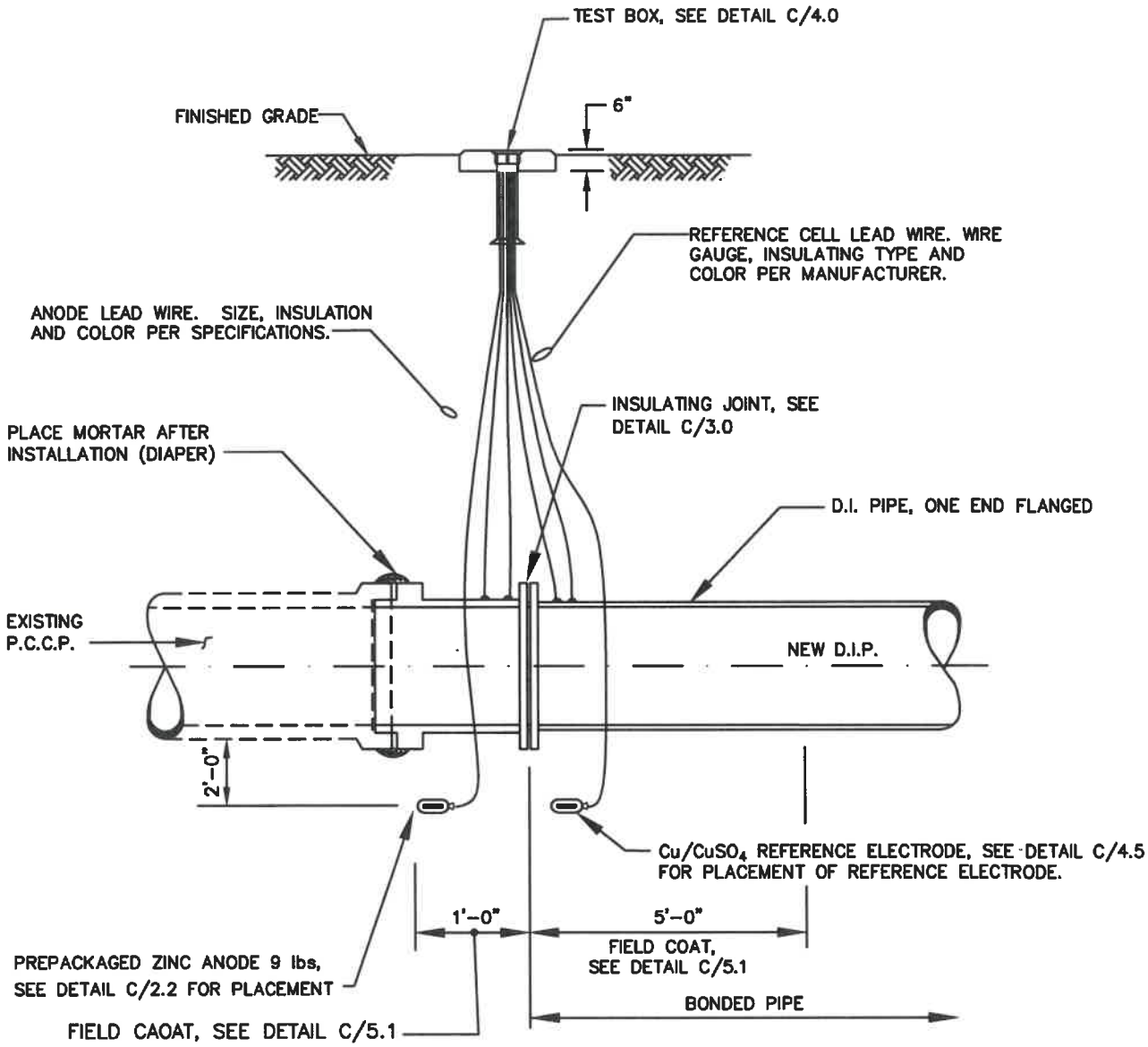


PCCP x DIP TIE-IN DETAIL

NOTES:

1. CONTRACTOR SHALL VERIFY ELECTRICAL ISOLATION OF INSULATING JOINT BEFORE COATING AND BURIAL.
2. DO NOT INSTALL TEST LEAD WIRES AND REFERENCE CELL.
3. APPLICABLE MANUFACTURERS' RECOMMENDATIONS SHALL BE FOLLOWED FOR INSTALLATION OF ADAPTER AND INSULATING FLANGE ASSEMBLIES.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmuen Chief Engineer	STANDARD DETAIL PCCP x DIP TIE - IN DETAIL WITH INSULATING JOINT	C 3.3

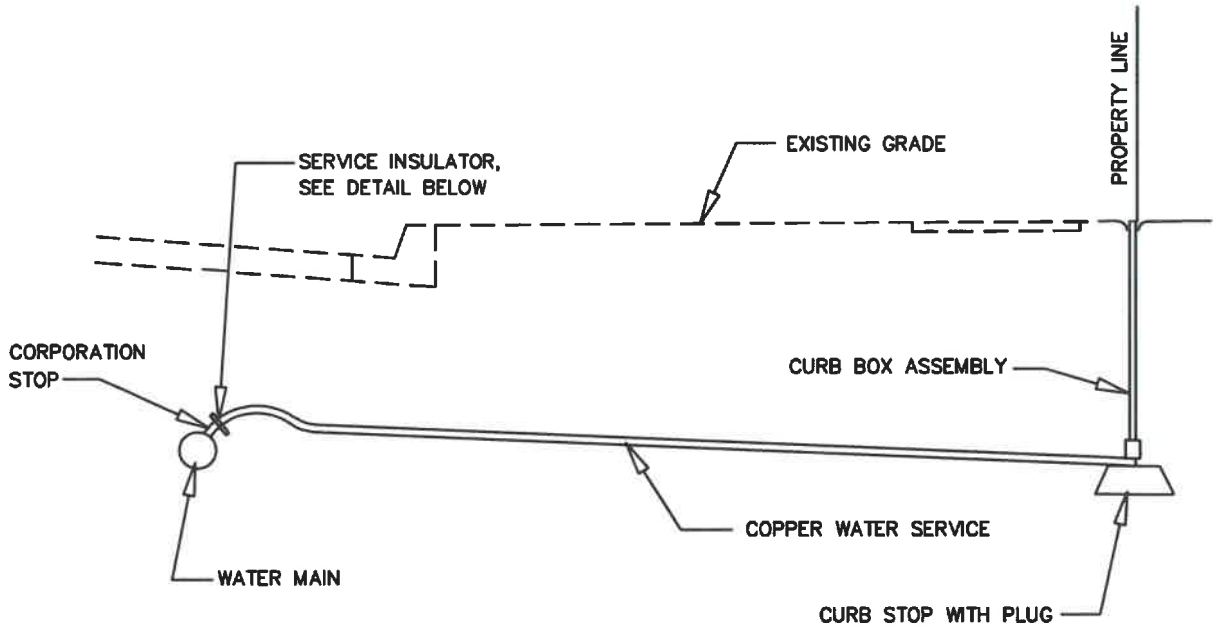


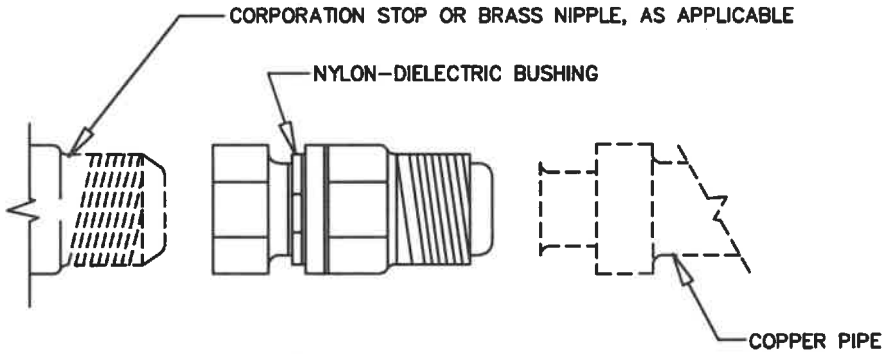
PCCP x DIP TIE-IN DETAIL

NOTES:

1. THE TEST LEAD WIRES SHALL BE STRANDED COPPER AWG WIRE WITH TW, THW, OR THWN
2. RUN ALL WIRES IN 2" PVC SCH. 40 FROM THE CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.
3. FOR PCCP x DIP TIE–IN FITTINGS AND ASSEMBLY, SEE DETAIL C/3.3.
4. AFTER INSTALLATION AND ASSEMBLY, TEST INSTALLING JOINT.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmer Chief Engineer	STANDARD DETAIL PCCP x DIP TIE - IN DETAIL WITH INSULATING JOINT AND TEST LEAD WIRES	C 3.4



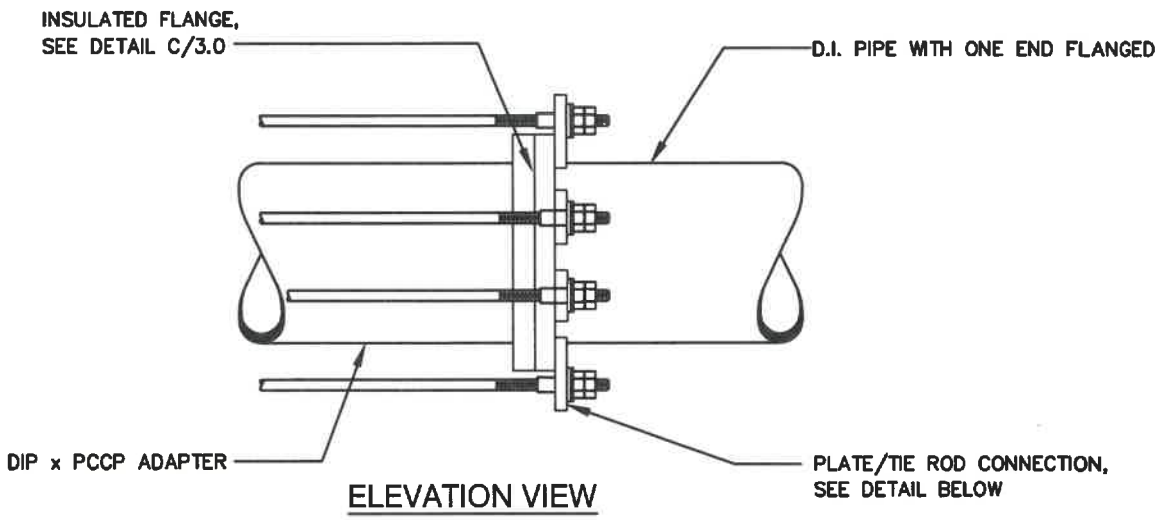


SERVICE INSULATOR

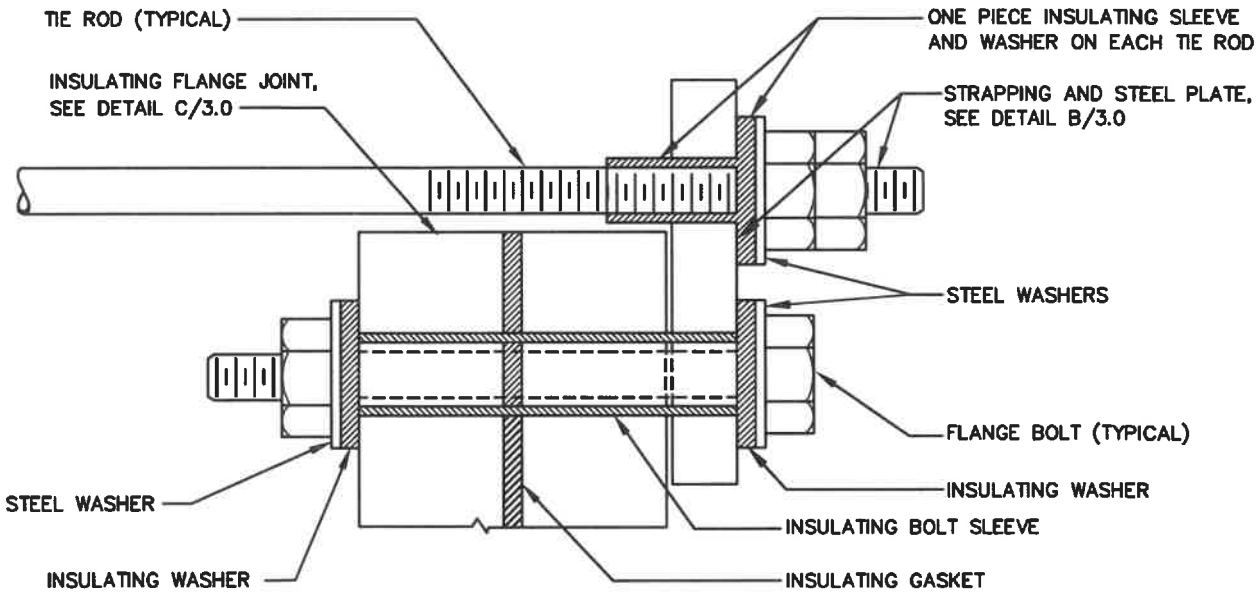
NOTES:

1. USE INSULATORS ON 1", 1 1/2", AND 2" COPPER PIPE HOUSE CONNECTIONS.
2. USE INSULATOR ON COPPER PIPE TAPPED ON CAST IRON OR DUCTILE IRON PIPES,

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Hannum Chief Engineer	STANDARD DETAIL INSULATED JOINT FOR COPPER PIPE SERVICE CONNECTIONS (2" OR LESS)	C 3.5



ELEVATION VIEW

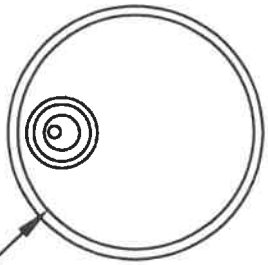


INSULATED FLANGED JOINT DETAIL

NOTES:

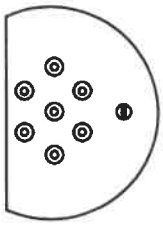
1. SEE DETAIL B/3.1b FOR THRUST BLOCK AND HARNESSED JOINT DETAIL.
2. SEE DETAIL C/3.0 FOR INSULATING JOINT DETAILS.
3. FOR ANODE AND TEST LEAD WIRES, SEE DETAILS C/3.3 OR C/3.4 AS APPROPRIATE.
4. ALL NUTS AND BOLTS SHALL BE TORQUED IN ACCORDANCE WITH SPECIFICATIONS.
5. AFTER INSTALLATION AND ASSEMBLY, TEST INSULATING JOINT TO VERIFY ISOLATION OF JOINT.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL INSULATED TIE RODS ON INSULATED FLANGE JOINT	C 3.6



COVER

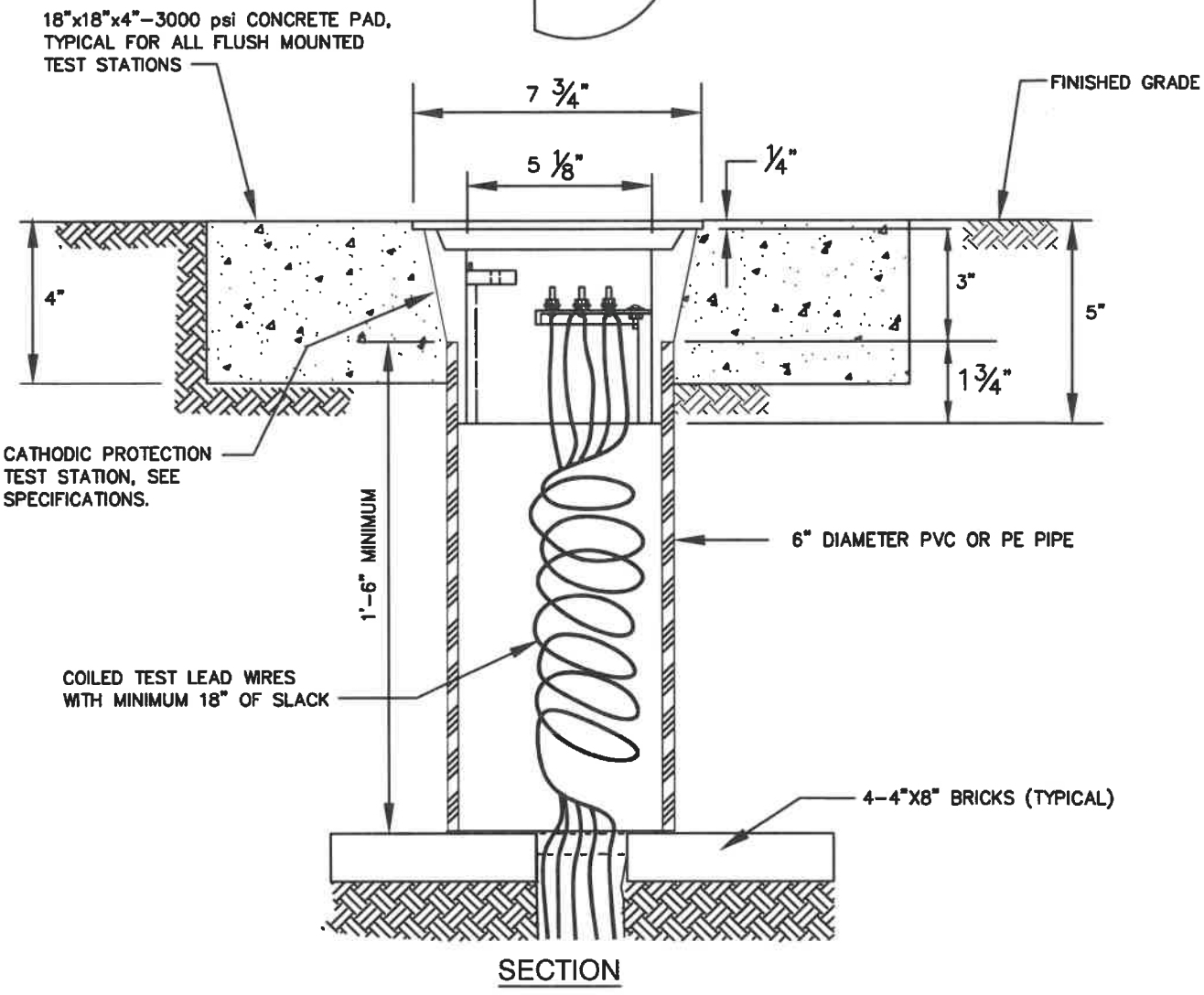
COVER, PER SPECIFICATIONS



TERMINAL BLOCK

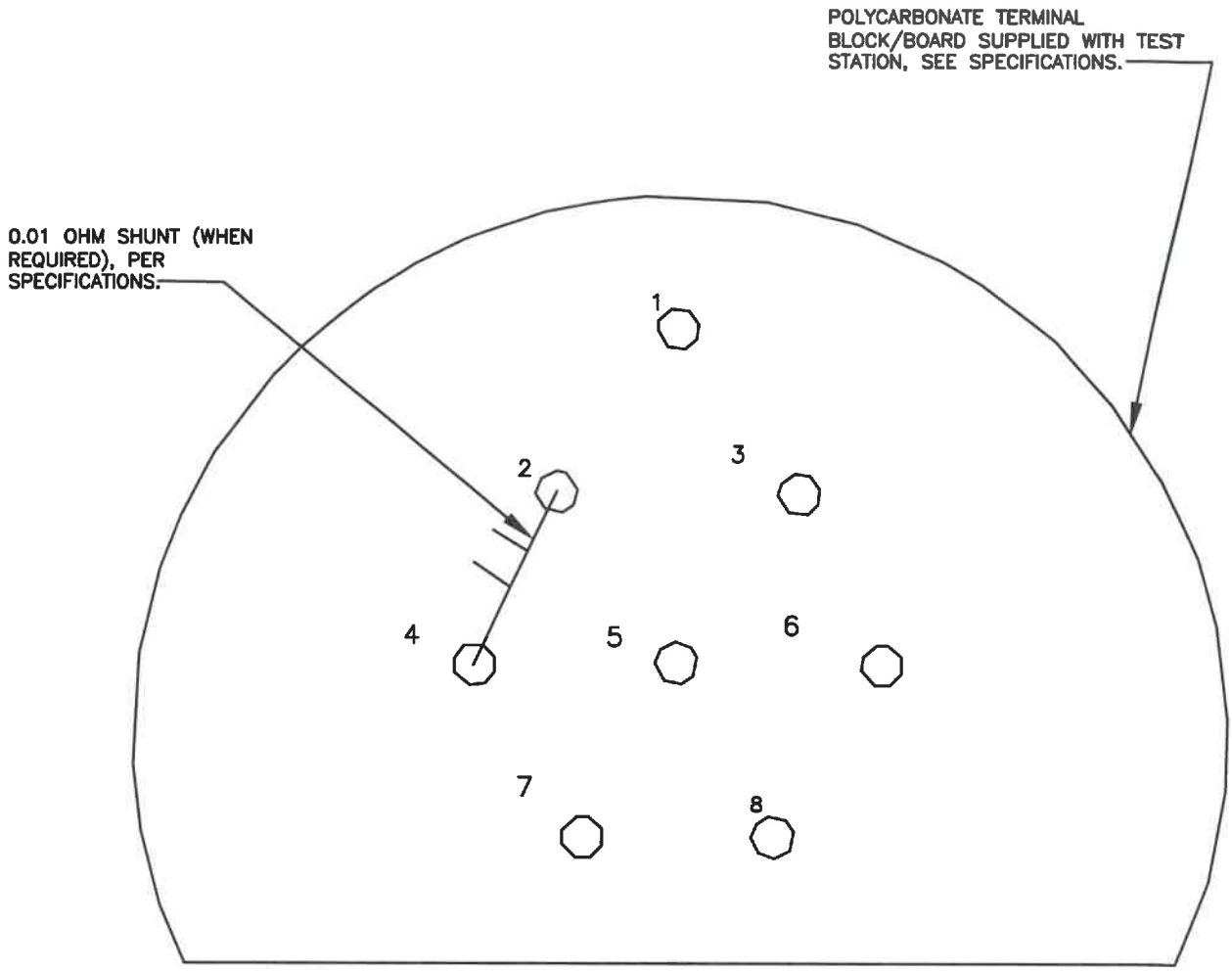
NOTES:

1. WHEN THE TEST STATION IS NOT DIRECTLY OVER THE PIPELINE, USE DETECTABLE WARNING TAPE 12" ABOVE THE LEAD WIRES.
2. LOCATE TEST STATION OUTSIDE OF PROPOSED OR EXISTING PAVED AREAS OR SIDEWALKS. (2' BACK IF POSSIBLE).
3. SEE DETAIL C/4.0a FOR WIRE TERMINATIONS.



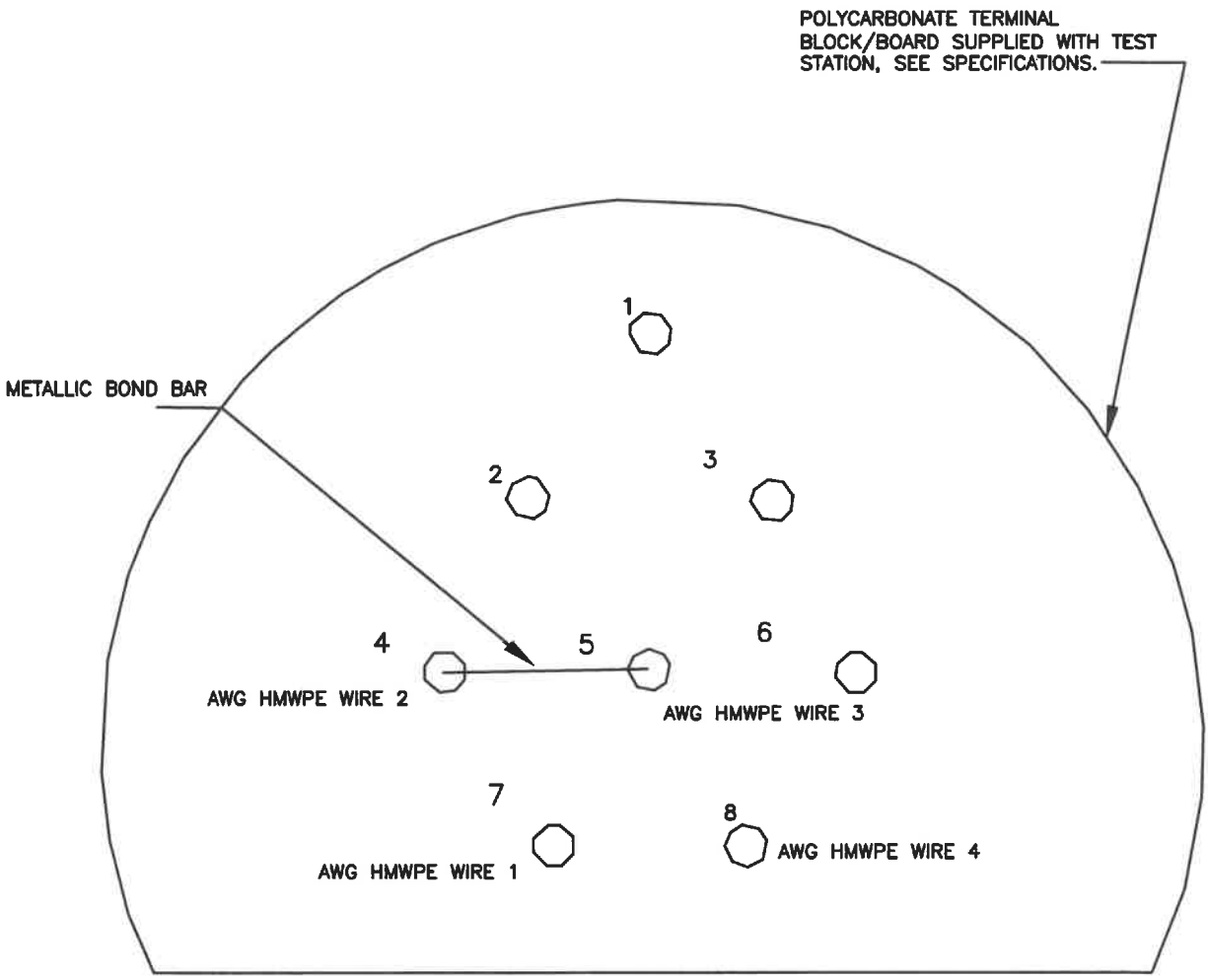
SECTION

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mitch Harmuth Chief Engineer	STANDARD DETAIL FLUSH - MOUNTED TEST STATION	C 4.0



TERMINAL #1 – NEW WATER MAIN
TERMINAL #2 – EXISTING PIPE
TERMINAL #3 – NEW WATER MAIN
TERMINAL #4 – PREPACKAGED MAGNESIUM ANODE LEAD WIRES
TERMINAL #5 – EXISTING PIPE
TERMINAL #6 – PERMANENT REFERENCE ELECTRODE
TERMINAL #7 – EMPTY
TERMINAL #8 – EMPTY

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL FLUSH MOUNTED TEST STATION TERMINAL BLOCK	C 4.0a



TERMINAL #4 – AWG HMWPE WIRE 2 FROM WATER PIPE 1

TERMINAL #5 – AWG HMWPE WIRE 3 FROM WATER PIPE 2

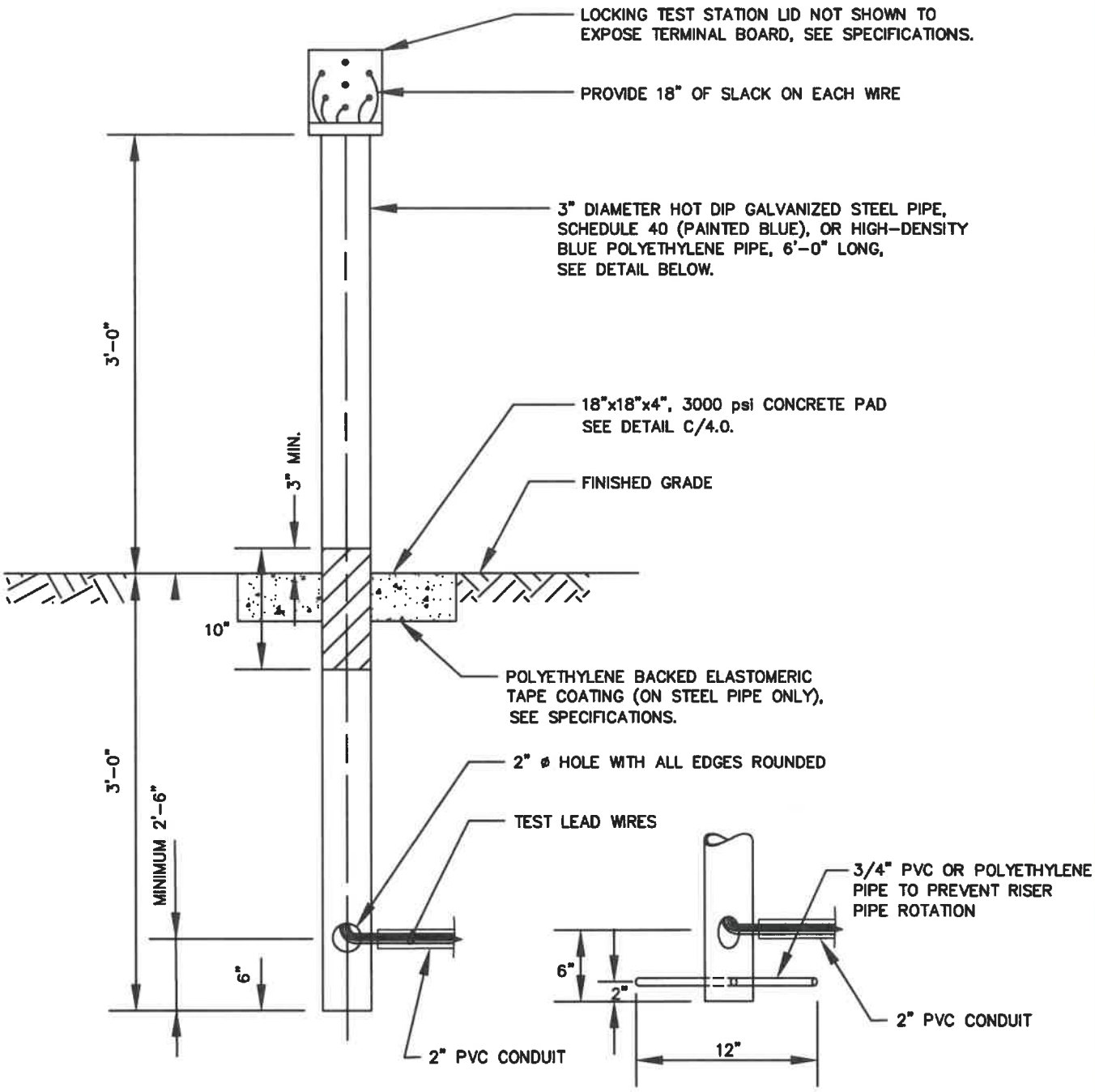
TERMINAL #7 – AWG HMWPE WIRE 1 FROM WATER PIPE 1

TERMINAL #8 – AWG HMWPE WIRE 4 FROM WATER PIPE 2

NOTES:

1. FOR BONDING OF CROSSING PIPELINES SEE SPECIAL DETAIL C/1.7, FOR PARALLEL PIPELINES SEE SPECIAL DETAIL C/1.7a.
2. IF MORE THAN TWO PIPELINES ARE BONDED, USE PIPELINE JUNCTION BOX, SEE SPECIAL DETAIL C/1.7b.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL FLUSH MOUNTED TEST STATION TERMINAL BLOCK FOR BONDED PIPELINES	C 4.0b

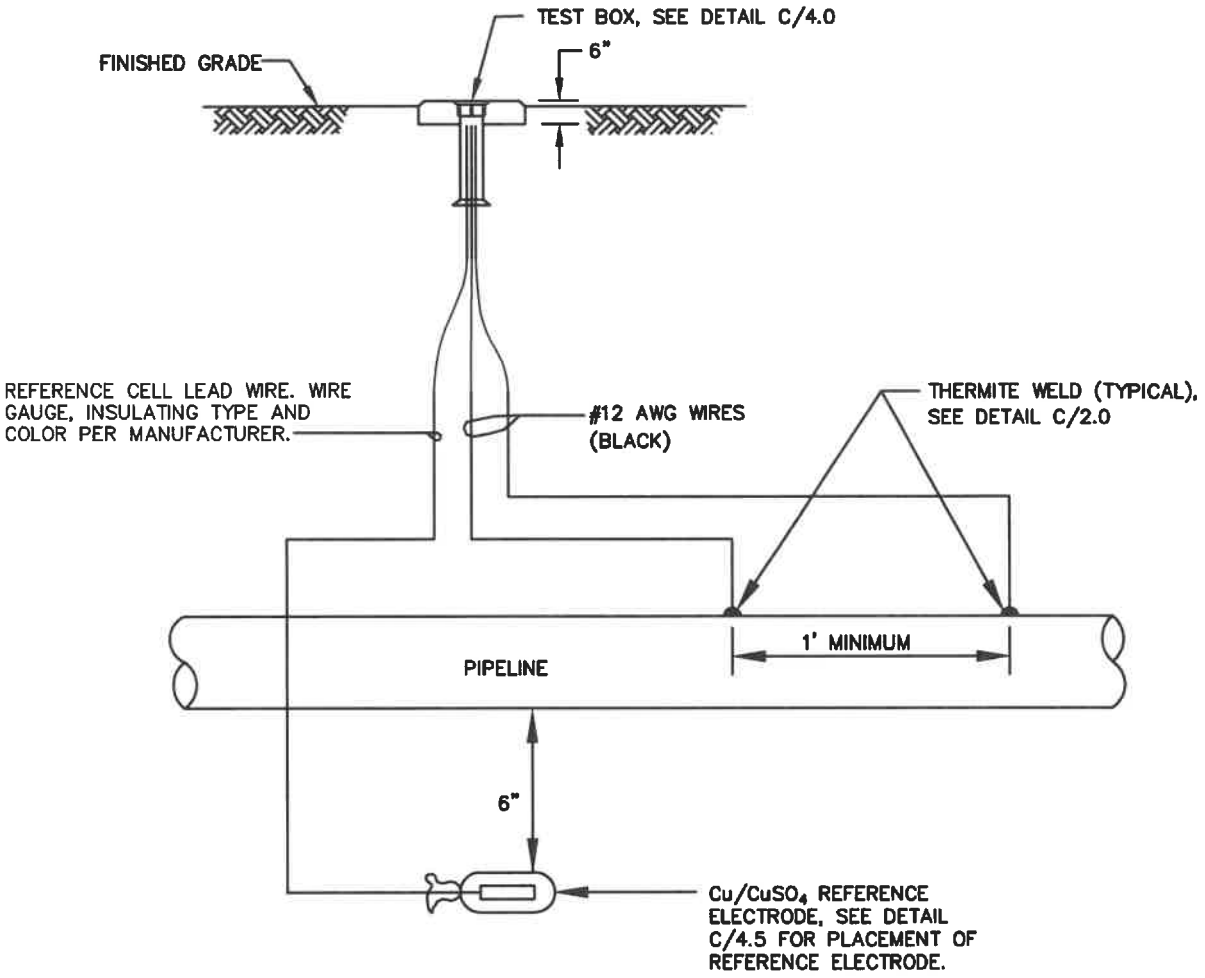


POLYETHYLENE PIPE INSTALLATION ONLY

NOTES:

1. WHERE TEST STATION IS NOT DIRECTLY OVER PIPELINE, USE DETECTABLE WARNING TAPE (YELLOW) OVER TEST WIRES, SEE SPECIFICATIONS.
2. LOCATE TEST STATION OUTSIDE OF PROPOSED OR EXISTING PAVED AREAS
3. RUN ALLS WIRES IN 2" PVC SCH. 40 FROM THE CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF THE TEST STATION ASSEMBLY.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PIPE MOUNTED ABOVE GROUND TEST STATION	C 4.2



NOTES:

1. EXCEPT AS NOTED ABOVE, TEST LEAD WIRES SHALL MEET THE REQUIREMENTS OF DETAIL C/3.0
2. RUN ALL WIRES IN 2" PVC SHC. 40 CONDUIT FROM THE CONNECTION POINT UNTIL THEY REACH THE BOTTOM OF THE TEST STATION ASSEMBLY.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmeyer Chief Engineer	STANDARD DETAIL TEST STATION WITH REFERENCE CELL	C 4.5

WASHINGTON SUBURBAN SANITARY COMMISSION

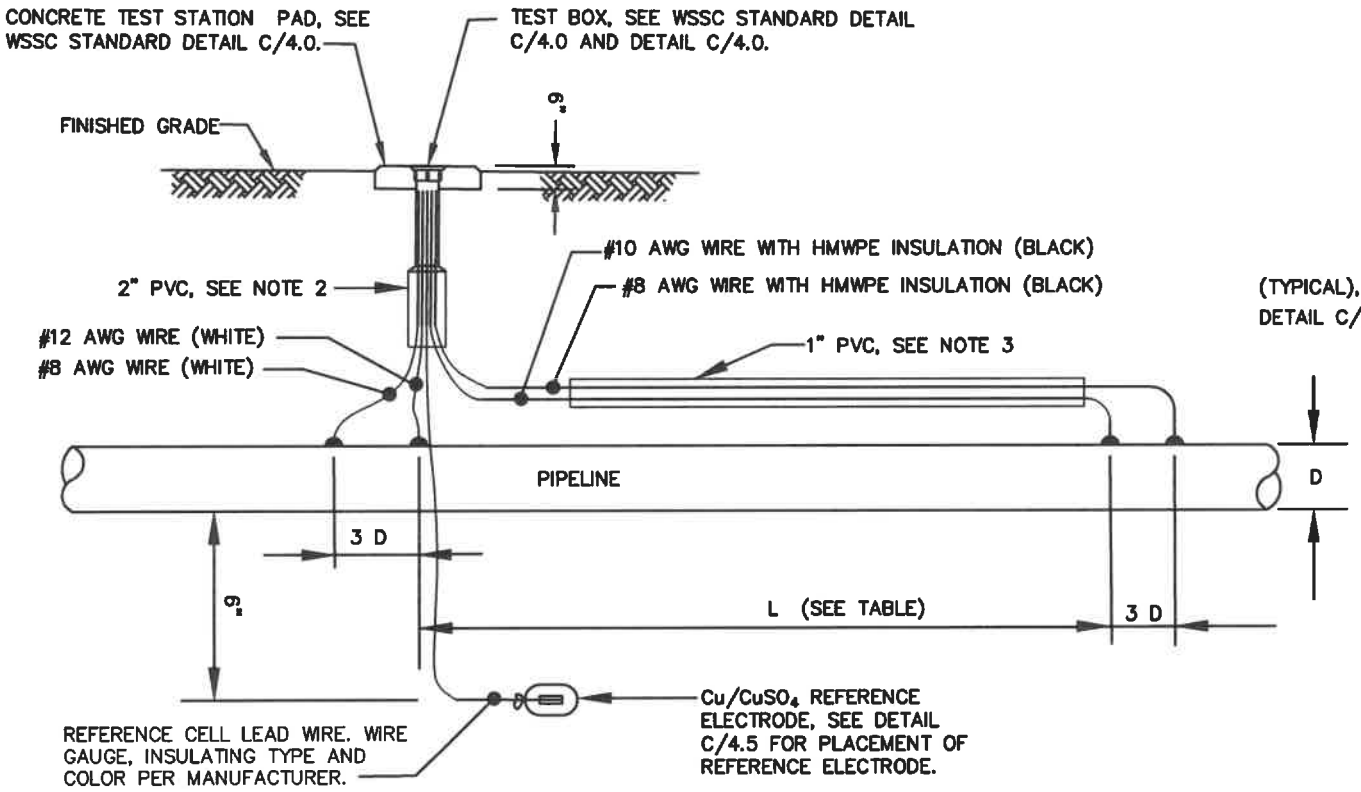
APPROVED: 7-26-21

Chief Engineer

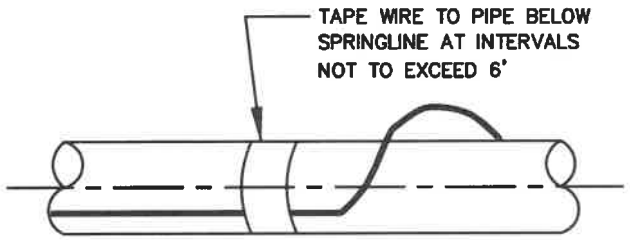
STANDARD DETAIL

IR DROP TEST STATION FOR DUCTILE IRON PIPE

C/4.6

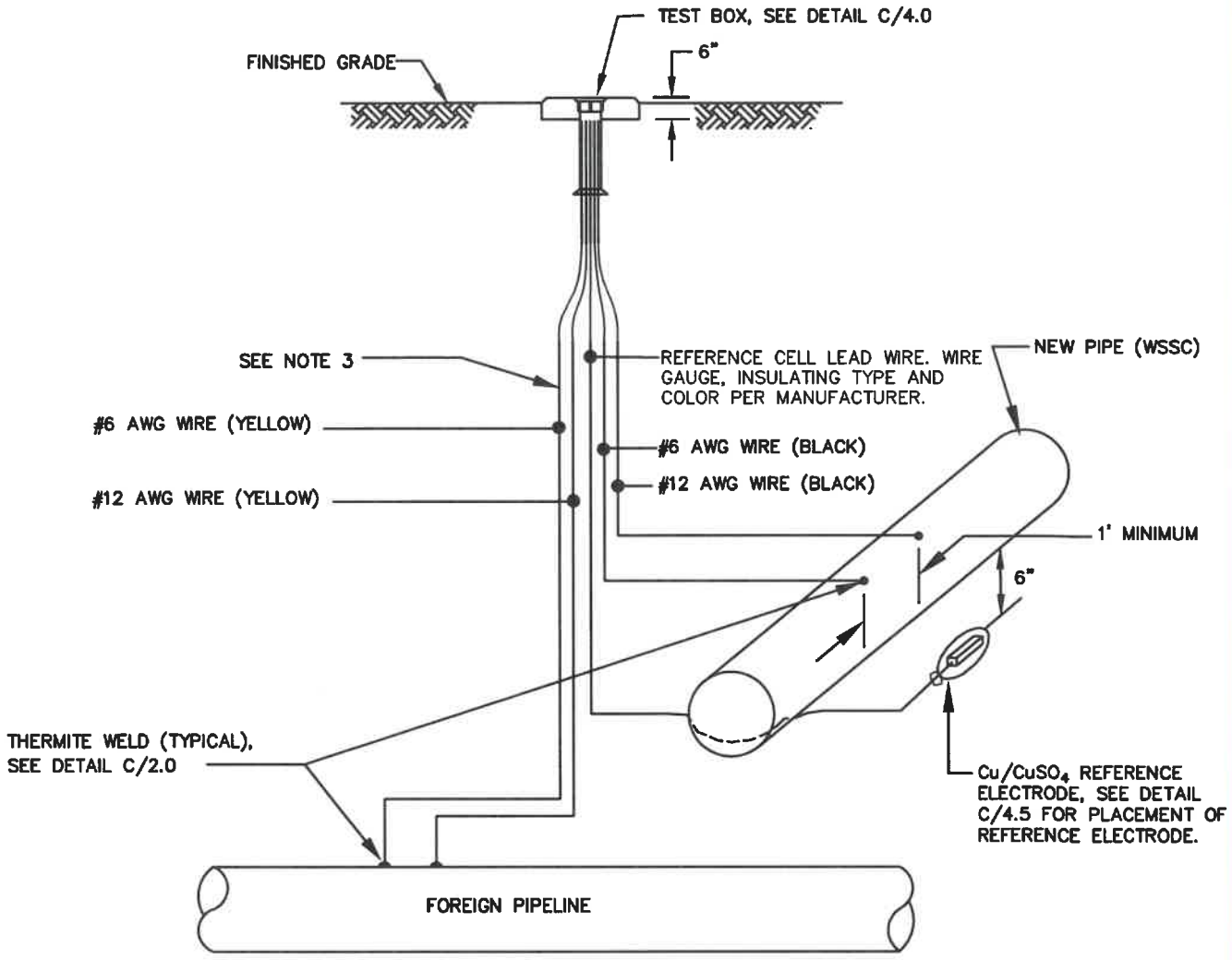


PIPE DIAMETER (D)	L (FEET)
4" TO 18"	100
20"	120
24"	160
30" TO 36"	200
42" TO 48"	240
54" TO 60"	300



NOTE:

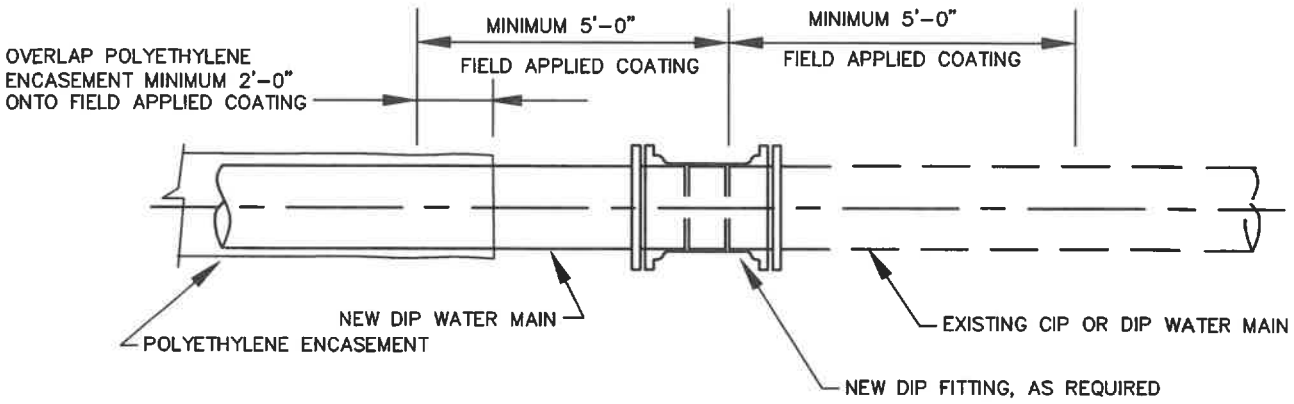
1. EXCEPT AS SPECIFIED ABOVE, TEST LEAD WIRES SHALL MEET REQUIREMENTS OF DETAIL C/3.0.
2. RUN ALL WIRES IN 2" PVC SCH40 CONDUIT FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.
3. ROUTE BLACK #8 AND #10 LEAD WIRES IN 1" SCH 40 PVC CONDUIT. TERMINATE CONDUIT AT HORIZONTAL TO VERTICAL TRANSITION WHERE BLACK LEADS JOIN OTHER LEADS TO BE BROUGHT INTO TEST STATION ASSEMBLY.

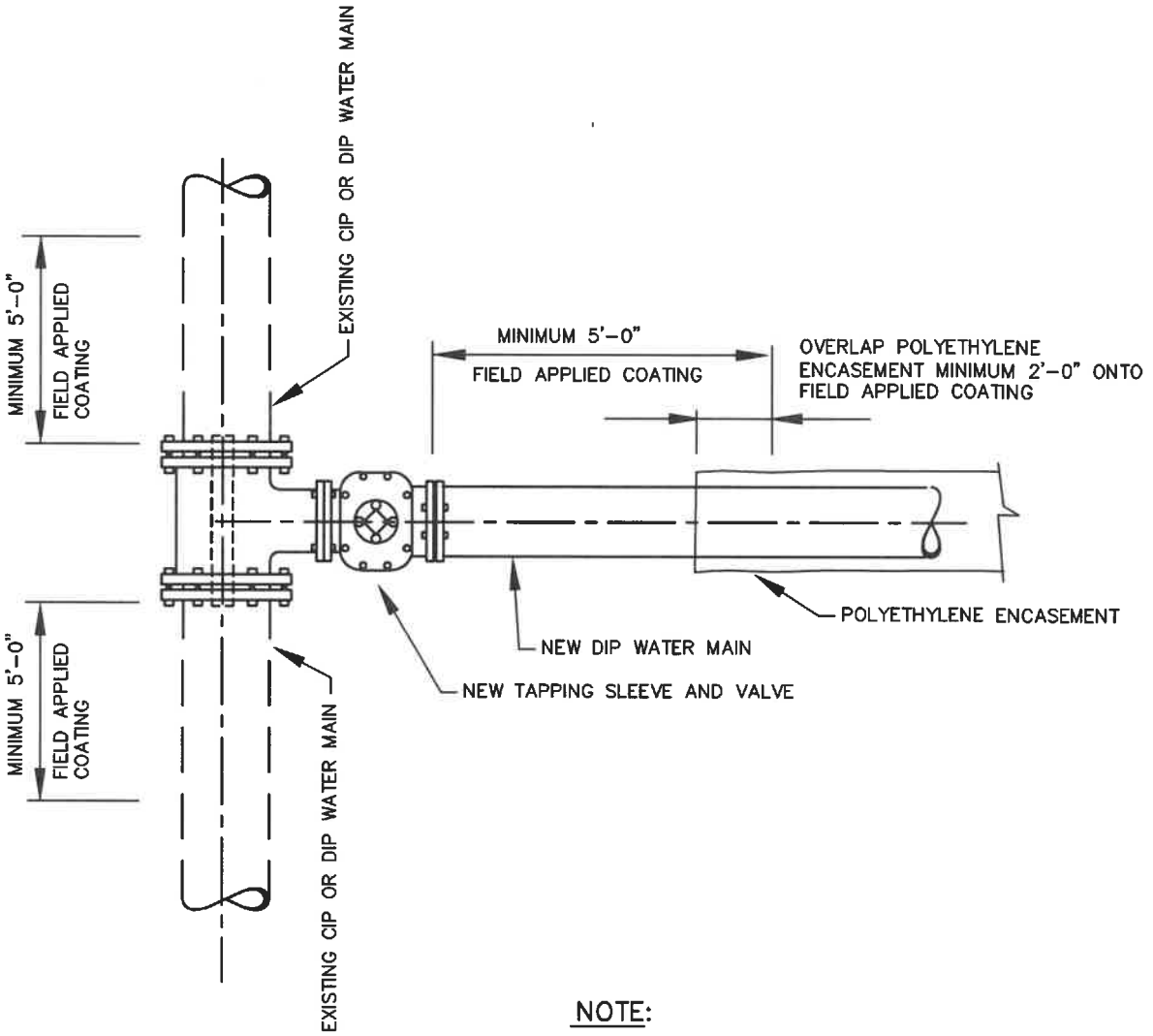


NOTES:

1. TEST LEAD WIRES SHALL MEET REQUIREMENTS OF DETAIL C/3.0, NOTE 1.
2. NOTIFY FOREIGN PIPELINE COMPANY IN ADVANCE FOR PERMISSION TO ATTACH WIRES TO THEIR PIPE, OR FOR THE FOREIGN PIPELINE COMPANY TO ATTACH WIRES TO THEIR PIPELINE.
3. RUN ALL WIRES IN 2" PVC SCH40 CONDUIT FROM CONNECTION POINTS UNTIL THEY REACH THE BOTTOM OF TEST STATION ASSEMBLY.

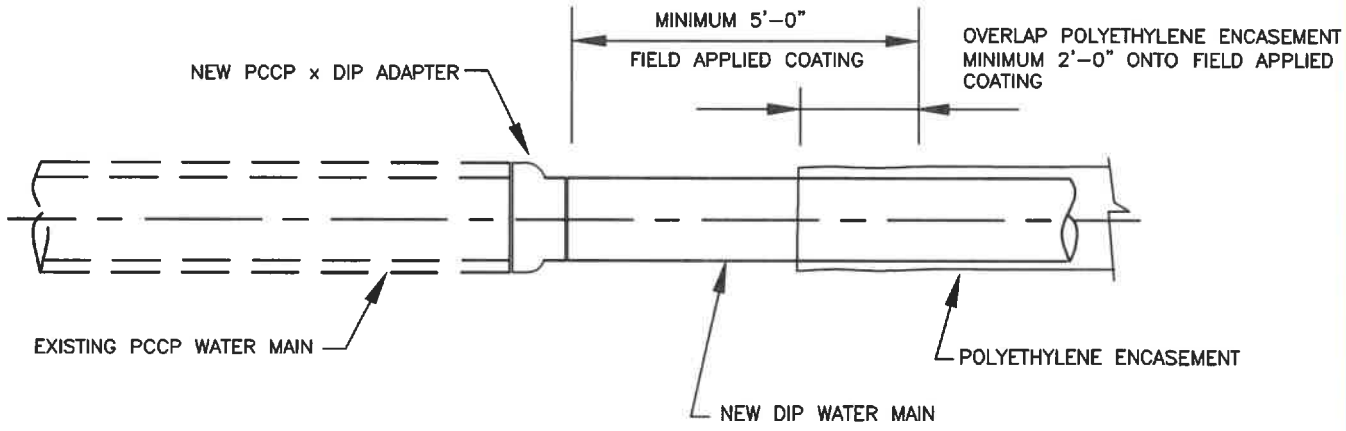
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL TEST STATION AT FOREIGN PIPELINE CROSSING	C 4.7





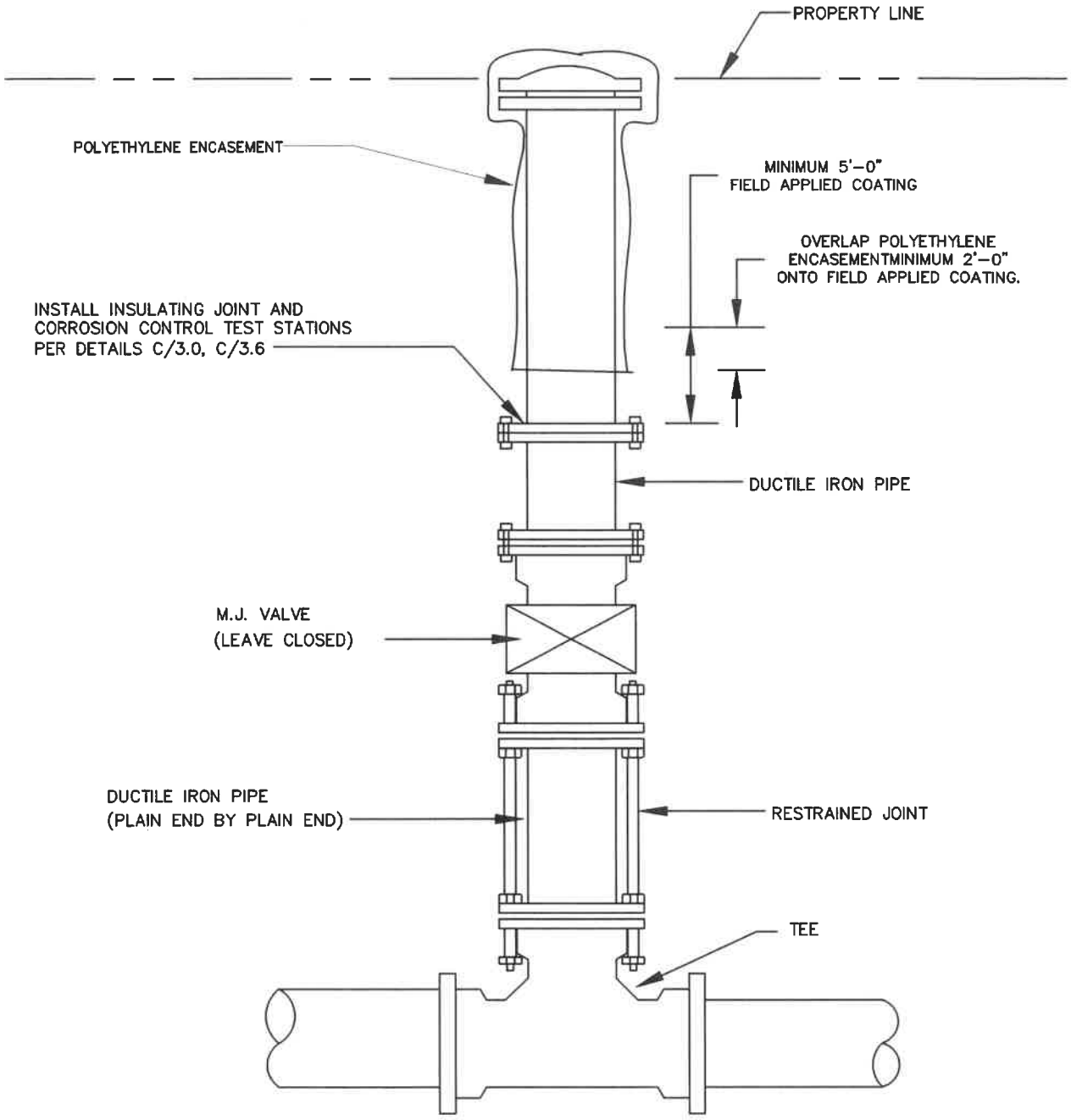
NOTE:
FOR FIELD APPLIED COATING, SEE SPECIFICATIONS.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL FIELD APPLIED COATING WHEN CONNECTING TO EXISTING CIP AND DIP WATER MAINS	C 5.0



NOTE:
FOR FIELD APPLIED COATING, SEE SPECIFICATIONS.

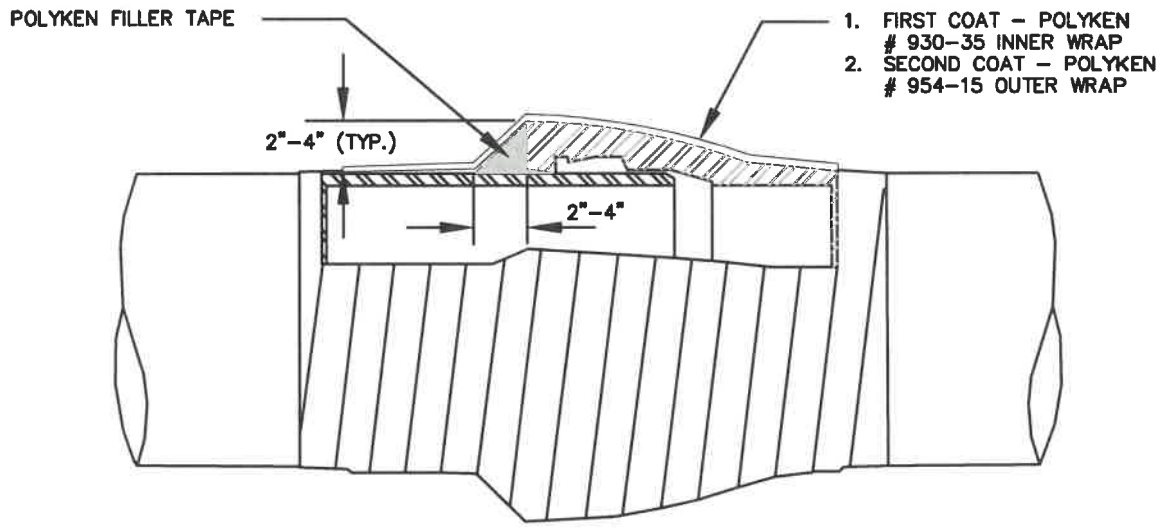
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Hammen Chief Engineer	STANDARD DETAIL FIELD APPLIED COATING WHEN CONNECTING TO EXISTING PCCP WATER MAINS	C 5.1



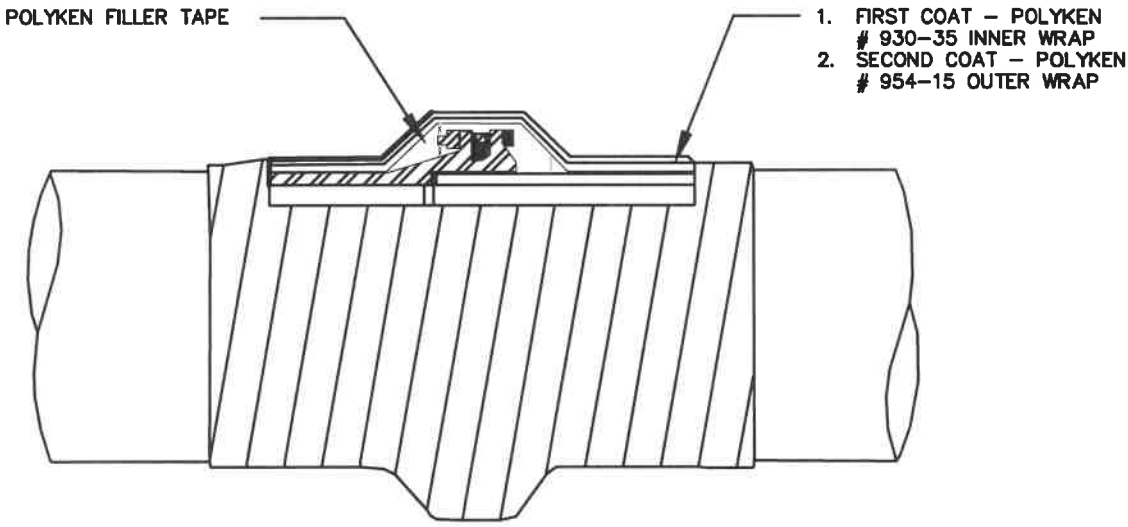
NOTES:

1. FOR INSTALLATION OF WHC, SEE STANDARD DETAIL W/5.12

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL 3" THRU 12" DUCTILE IRON WATER HOUSE CONNECTION INSULATING JOINT	C 5.2



BELL AND SPIGOT JOINT

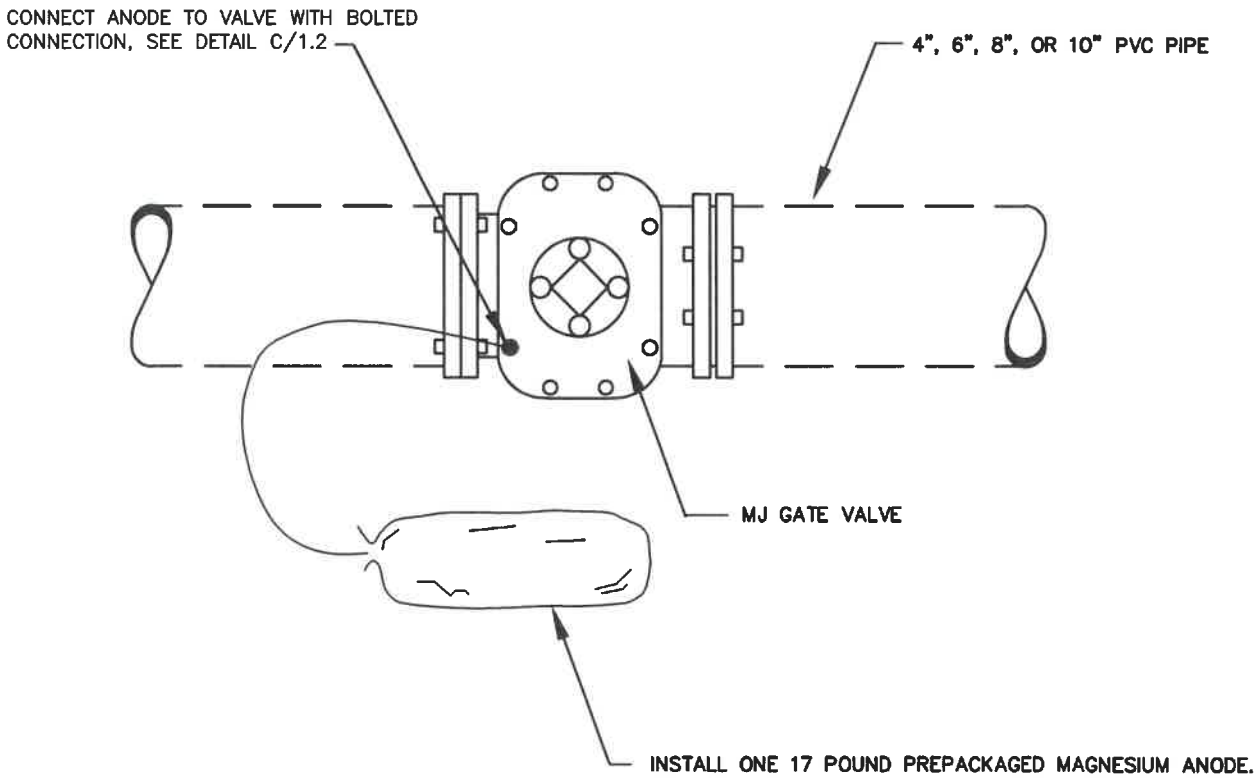


MEGALUG JOINT

NOTES:

1. CLEAN JOINT OF ALL FOREIGN MATERIAL BY WIRE BRUSHING.
2. APPLY COATING PRIMER TO JOINT.
3. INSTALL FILLER TAPE AS SHOWN, AND FILL ALL VOIDS BETWEEN FLANGES AND BOLTS.
4. APPLY TWO LAYERS OF JOINT WRAP TAPE.
5. COAT PIPE FITTINGS IN A SIMILAR MANNER.
6. HEAT SHRINKS SLEEVES WITH FILLER MATERIAL AS RECOMMENDED BY HEAT SHRINK SLEEVE MANUFACTURER MAY ALSO BE USED.

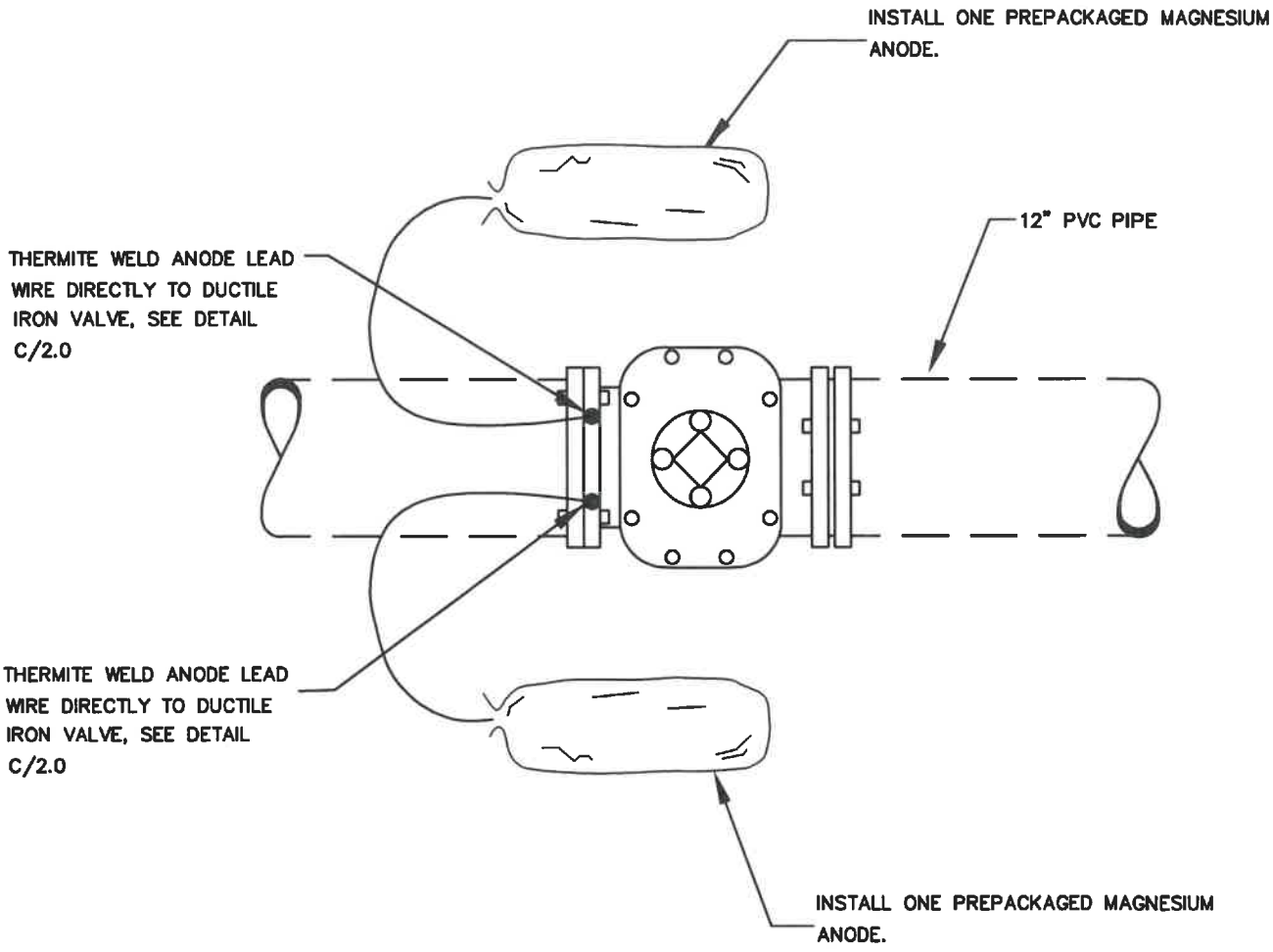
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL JOINT COATING DETAIL	C 6.0



NOTES:

1. ANODE PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL C/7.12.
2. DO NOT THERMITE WELD TO PVC PIPE.

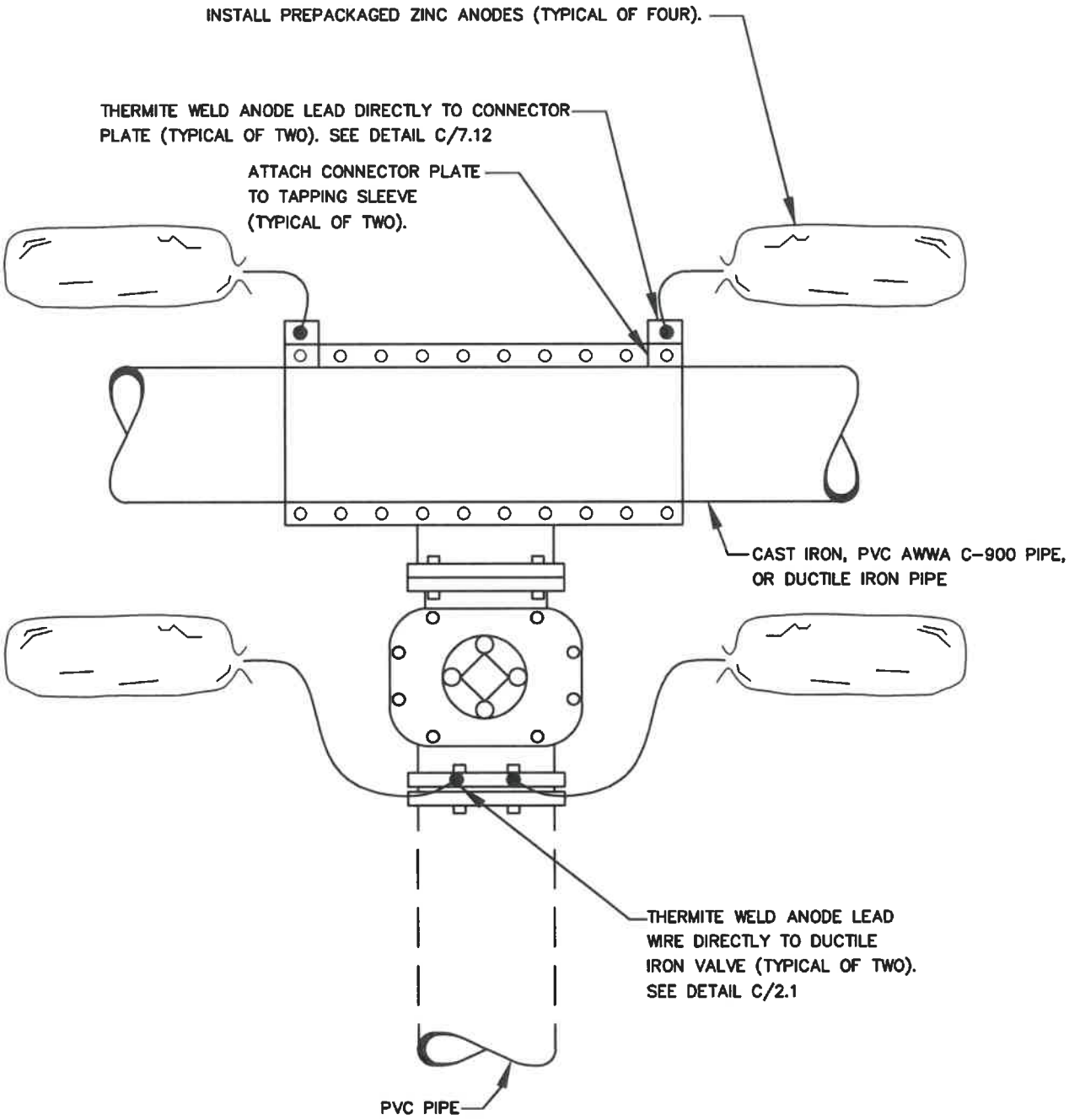
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE 4-INCH, 6-INCH, 8-INCH, OR 10-INCH ANODE PROTECTION VALVE	C 7.0



NOTES:

1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
2. DO NOT THERMITE WELD TO PVC PIPE.
3. SEE SPECIFICATION FOR ANODE SIZE.

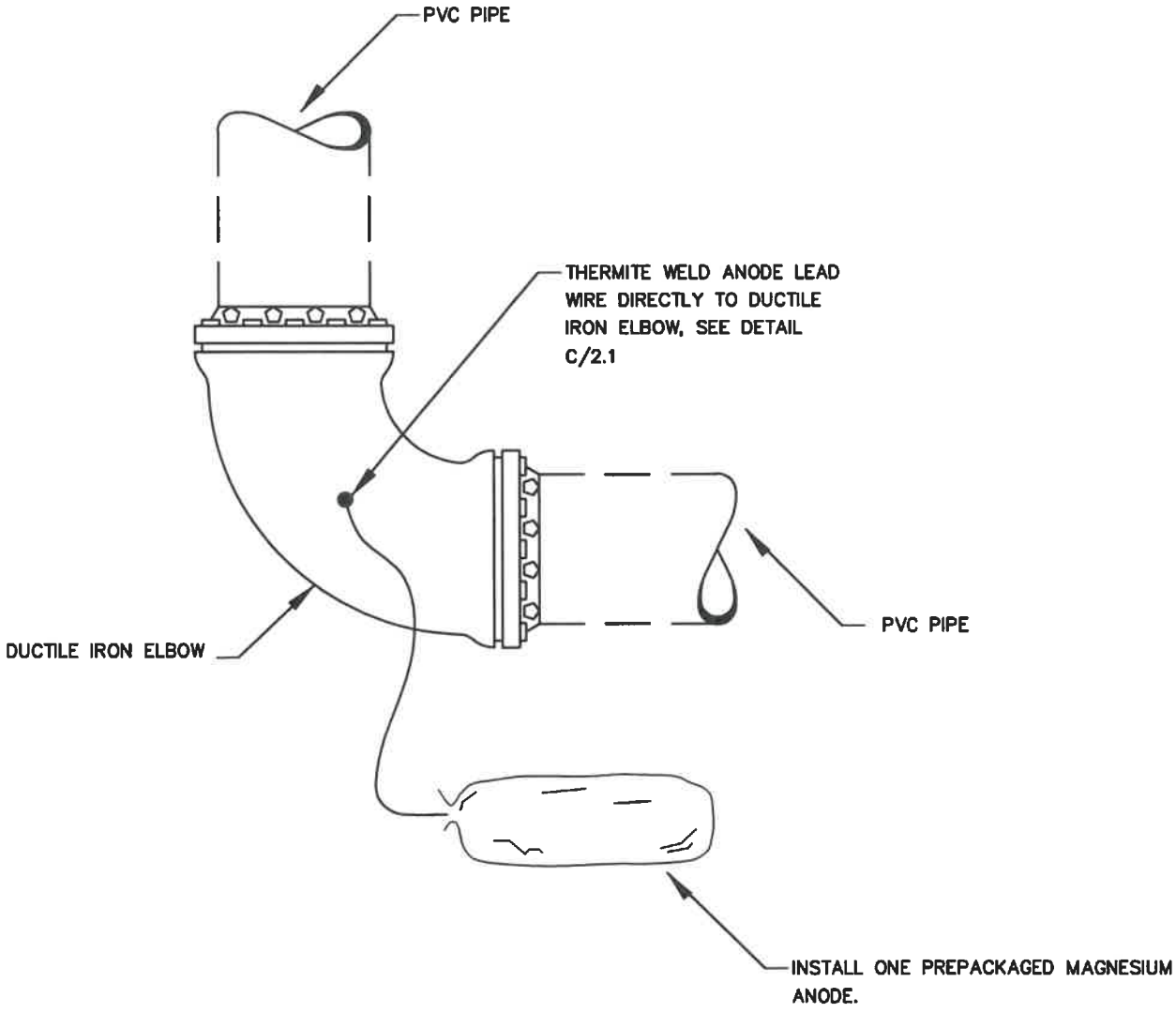
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE 12-INCH ANODE PROTECTION VALVE	C 7.1



NOTES:

1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
2. DO NOT THERMITE WELD TO PVC PIPE.
3. SEE SPECIFICATION FOR ANODE SIZE.

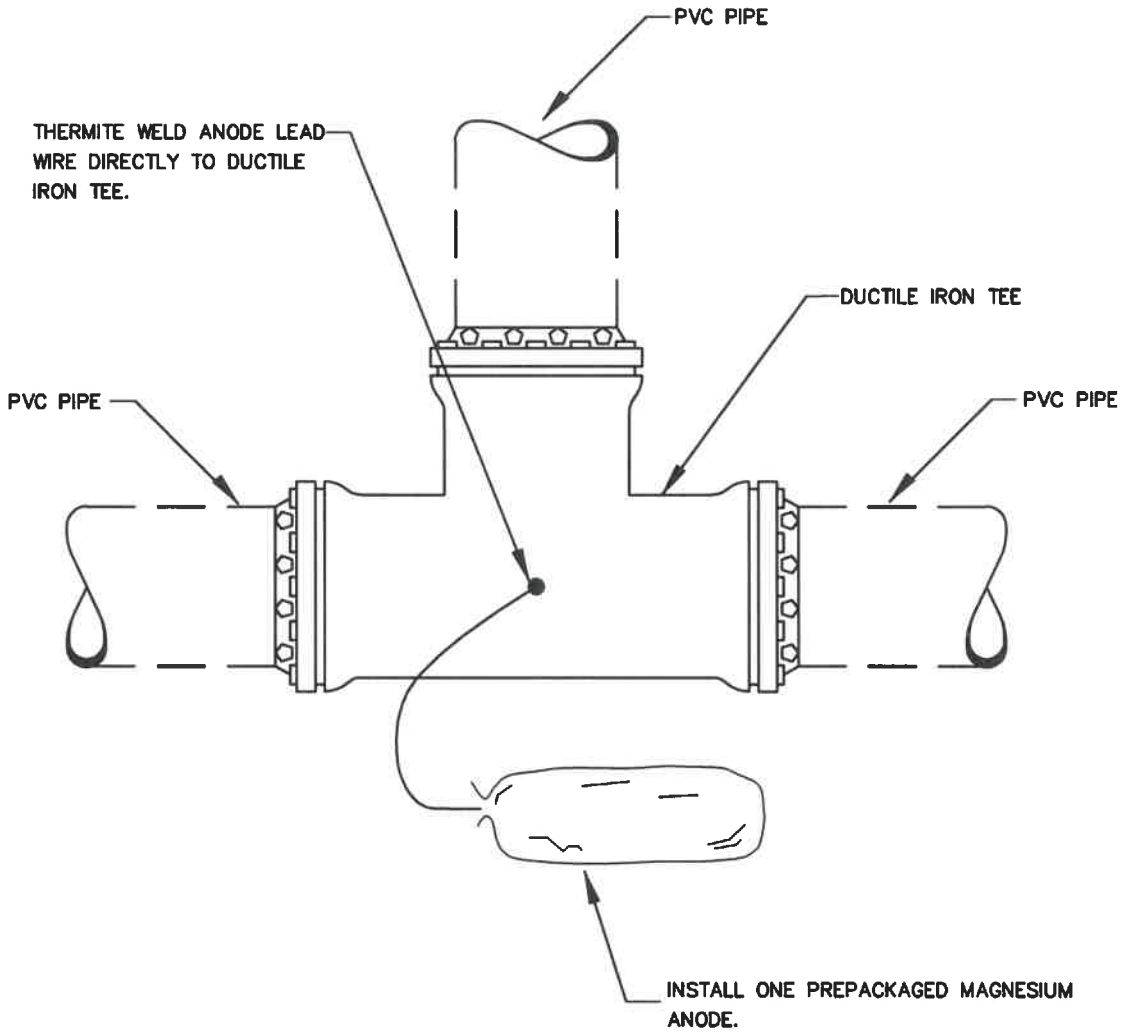
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE TAPPING SLEEVE AND VALVE	C 7.2



NOTES:

1. ANODES REQUIRED ONLY IF ELBOW IS DUCTILE IRON.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
3. DO NOT THERMITE WELD TO PVC PIPE.
4. SEE SPECIFICATION FOR ANODE SIZE.

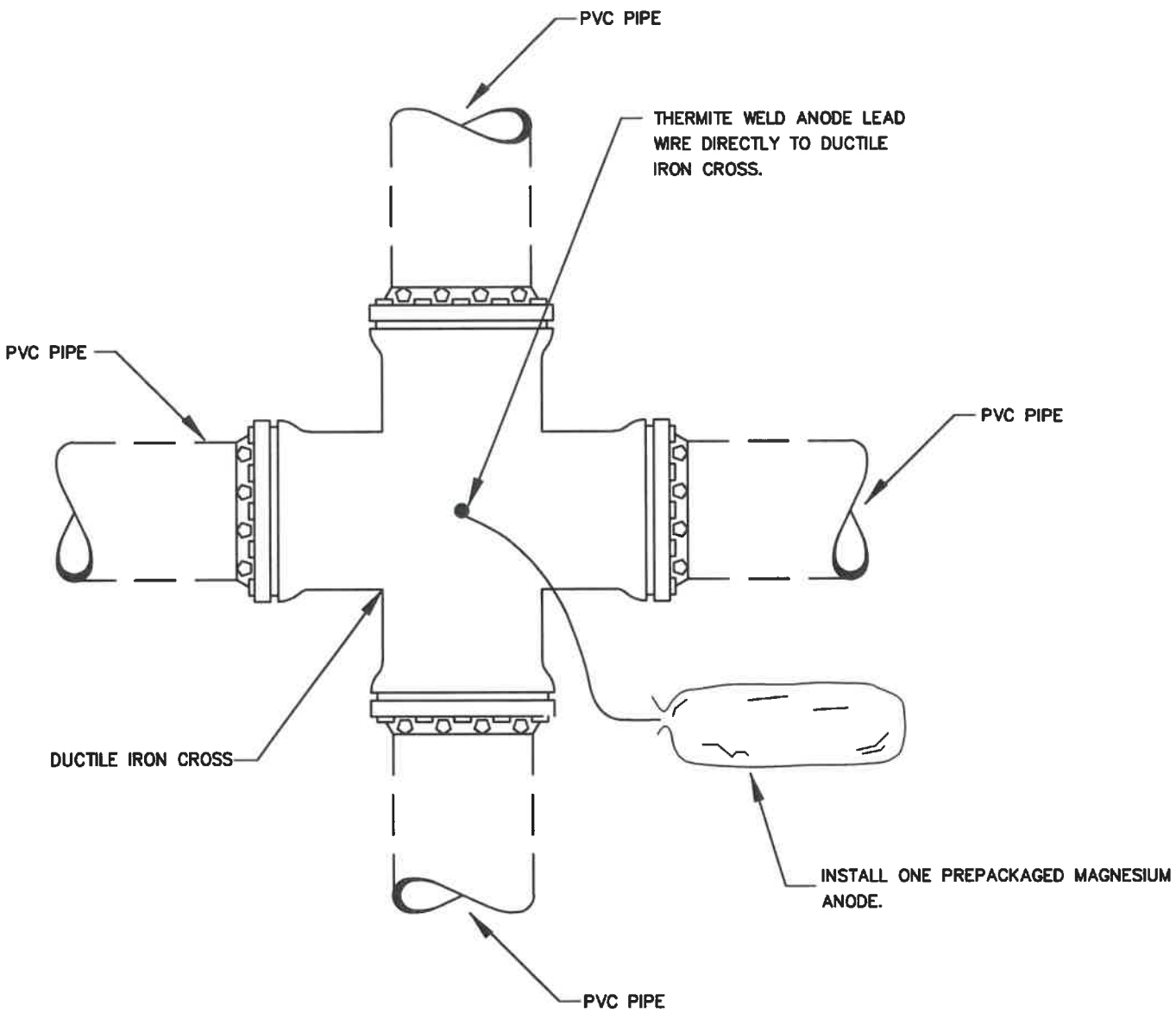
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harmon Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE ANODE PROTECTION ELBOW	C 7.3



NOTES:

1. ANODES REQUIRED ONLY IF TEE IS DUCTILE IRON.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
3. DO NOT THERMITE WELD TO PVC PIPE.
4. SEE SPECIFICATION FOR ANODE SIZE.

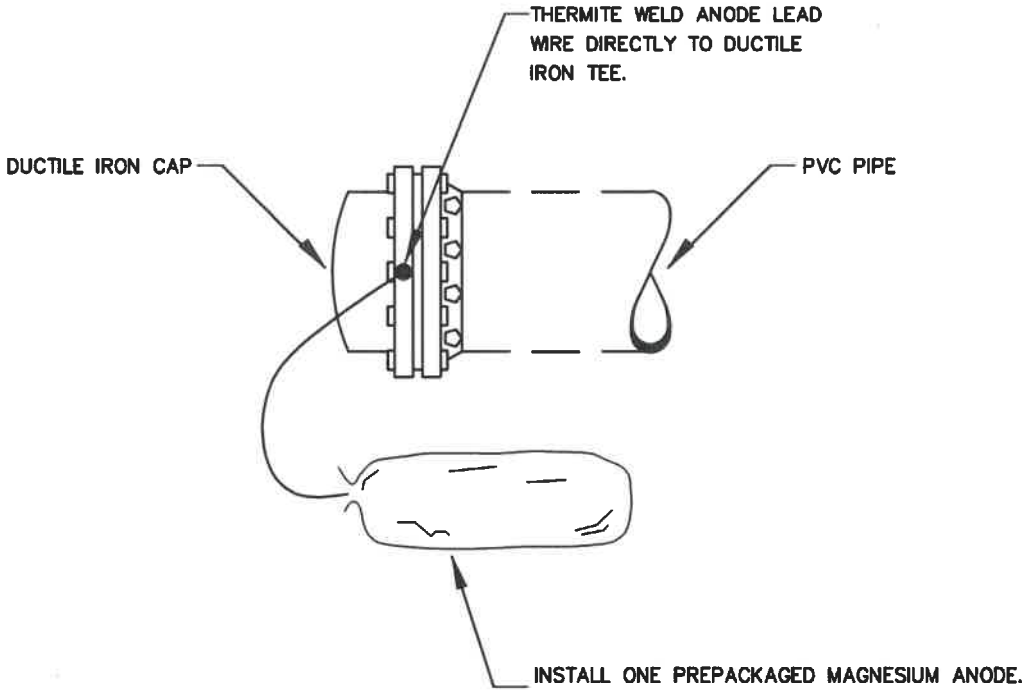
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harman Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE ANODE PROTECTION TEE	C 7.4



NOTES:

1. ANODES REQUIRED ONLY IF CROSS IS DUCTILE IRON.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
3. DO NOT THERMITE WELD TO PVC PIPE.
4. SEE SPECIFICATION FOR ANODE SIZE.

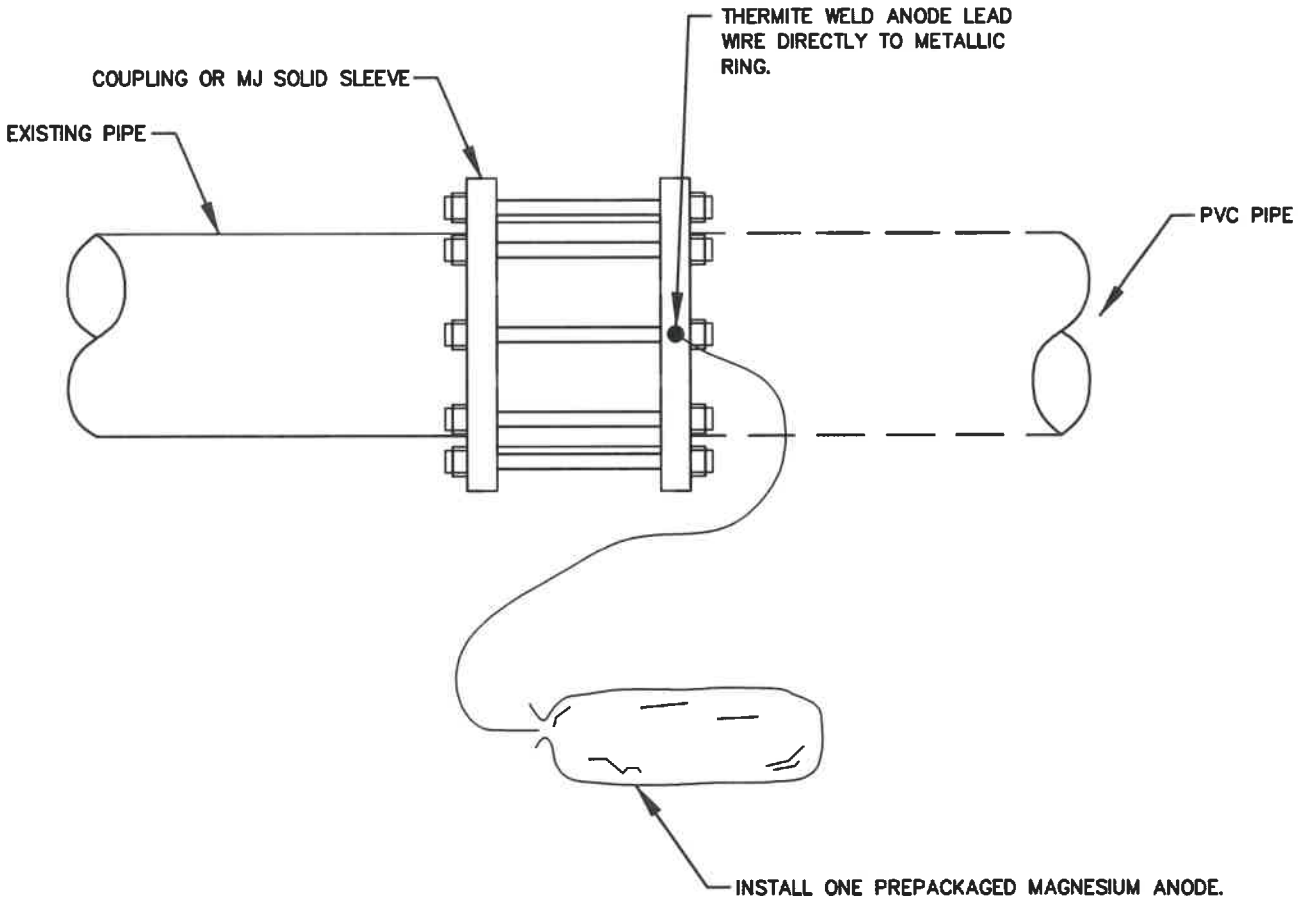
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVCAWWA C-900 PIPE ANODE PROTECTION CROSS	C 7.5



NOTES:

1. ANODES REQUIRED ONLY IF CAP IS DUCTILE IRON.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
3. DO NOT THERMITE WELD TO PVC PIPE.
4. SEE SPECIFICATION FOR ANODE SIZE.

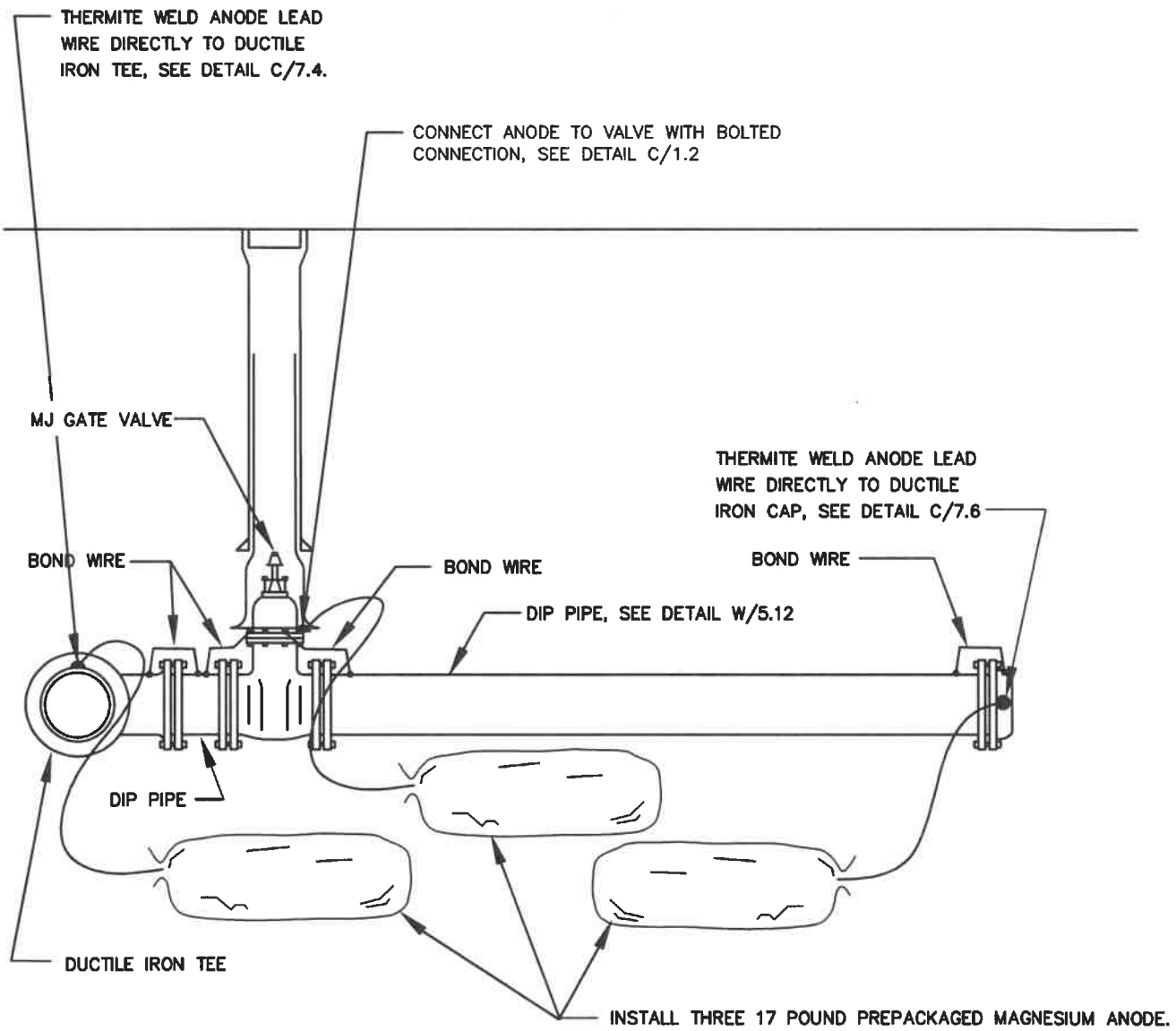
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE ANODE PROTECTION CAP	C 7.6



NOTES:

1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
2. DO NOT THERMITE WELD TO PVC PIPE.
3. SEE SPECIFICATION FOR ANODE SIZE.
4. IF COUPLING IS EPOXY COATED, REMOVE FROM COUPLING RING WHERE BOLTS ARE MOVED

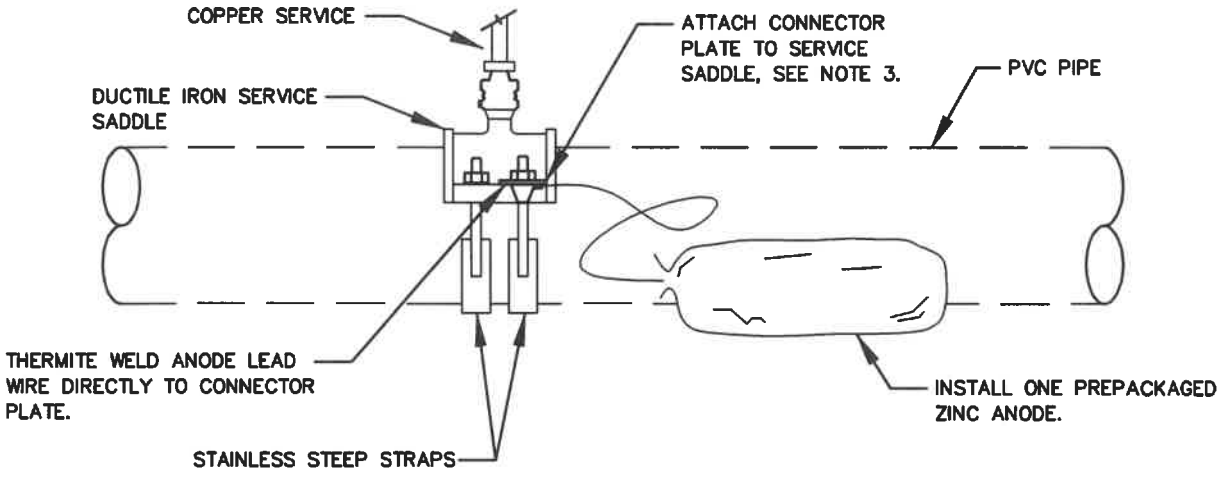
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mitch Hammen Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE ANODE PROTECTION COUPLING	C 7.7



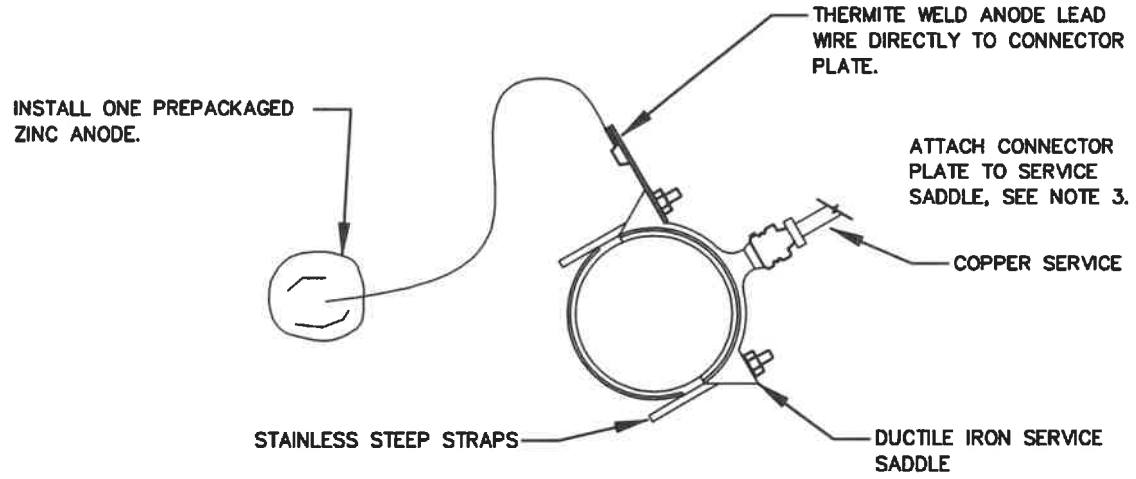
NOTES:

1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL C/7.13.
2. DO NOT THERMITE WELD TO PVC PIPE.
3. BOND ALL JOINTS ON DIP, SEE DETAILS C/1.0 AND C/1.1.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harman Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE 4-INCH TO 12-INCH ANODE PROTECTION FOR WATER HOUSE CONNECTION	C 7.9



PLAN

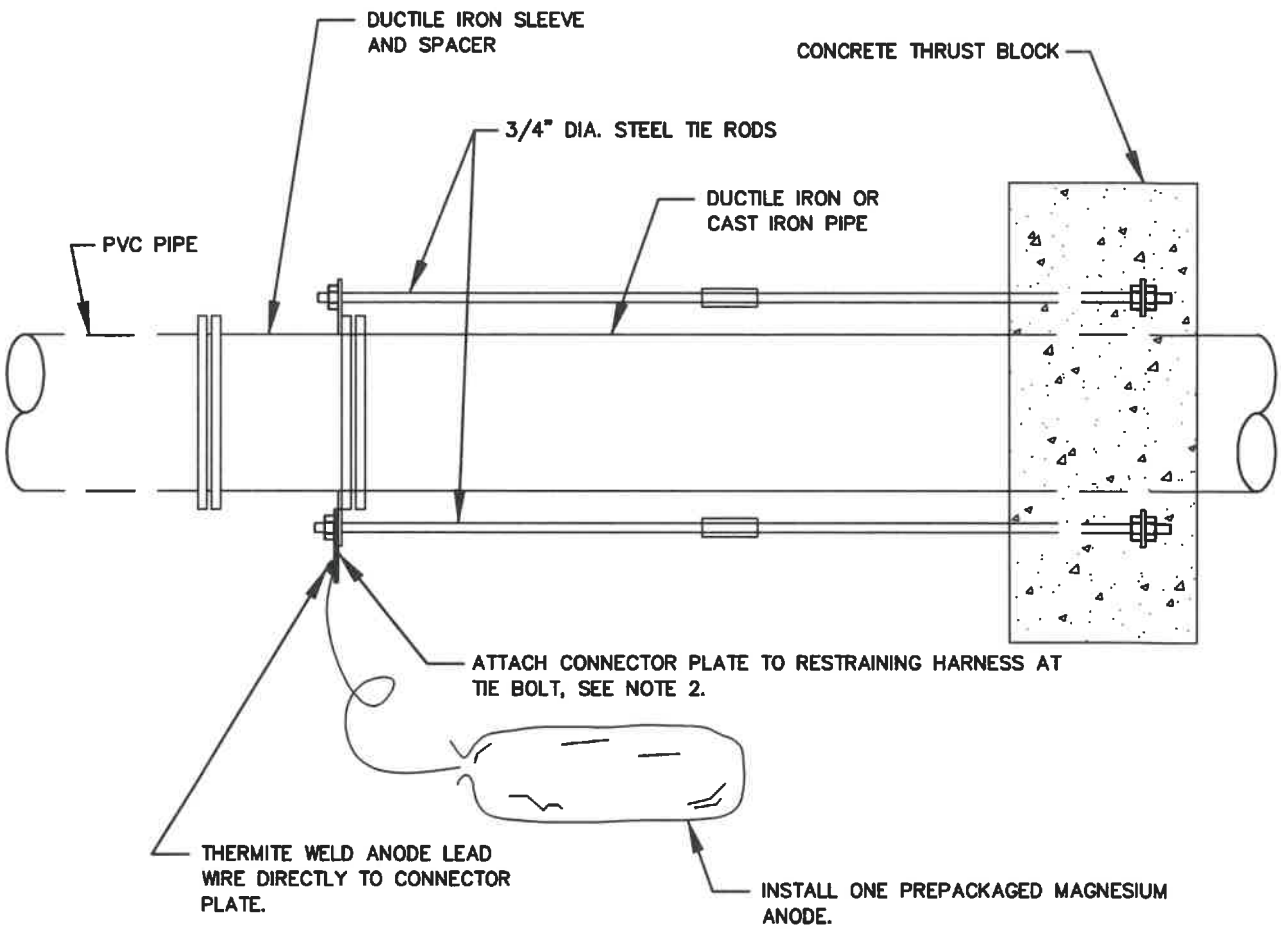


SECTION VIEW

NOTES:

1. CONNECTOR PLATE TO BE THERMITE WELDED TO ANODE LEAD WIRE PRIOR TO ATTACHING CONNECTOR PLATE TO BE SERVICE SADDLE.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
3. REMOVE COATING FROM SERVICE SADDLE WHERE CONNECTOR PLATE IS TO BE MOUNTED. REMOVE COATING IMMEDIATELY PRIOR TO ATTACHING THE CONNECTOR PLATE.
4. DO NOT THERMITE WELD TO PVC PIPE.
5. SEE SPECIFICATION FOR ANODE SIZE.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE SERVICE SADDLE	C 7.10

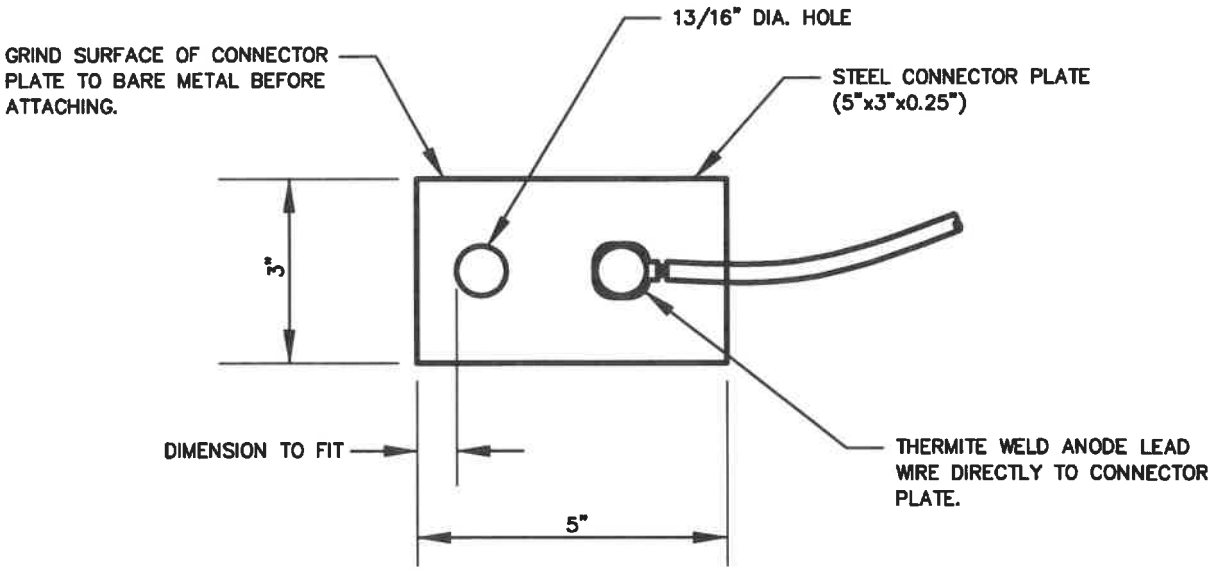


NOTES:

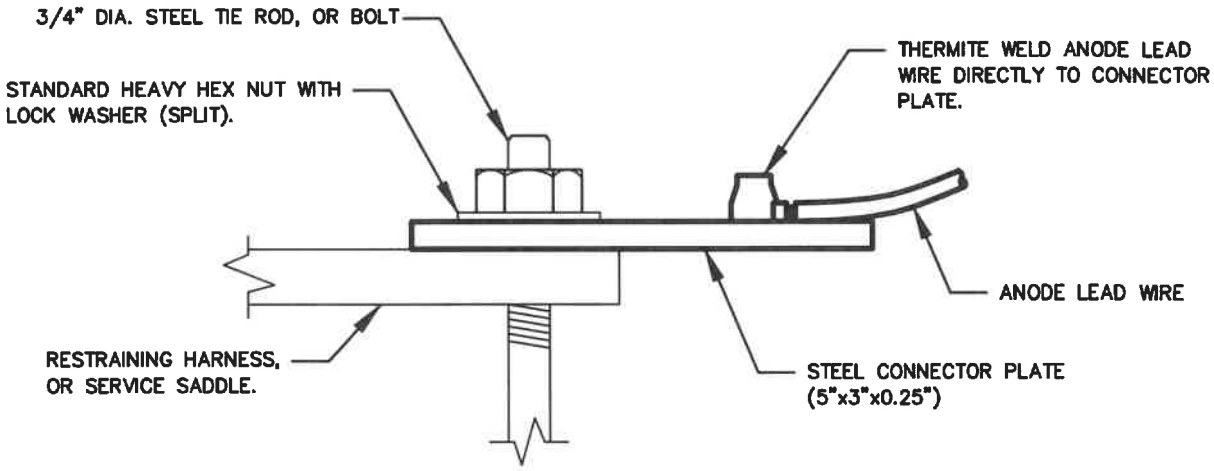
1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE.
2. REMOVE COATING FROM RESTRAINING HARNESS WHERE CONNECTOR PLATE IS TO BE MOUNTED. REMOVE COATING IMMEDIATELY PRIOR TO ATTACHING THE CONNECTOR PLATE.
3. DO NOT THERMITE WELD TO PVC PIPE.
4. SEE SPECIFICATION FOR ANODE SIZE.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mitch Harman Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE IN-LINE THRUST BLOCK	C 7.11

C711



PLAN

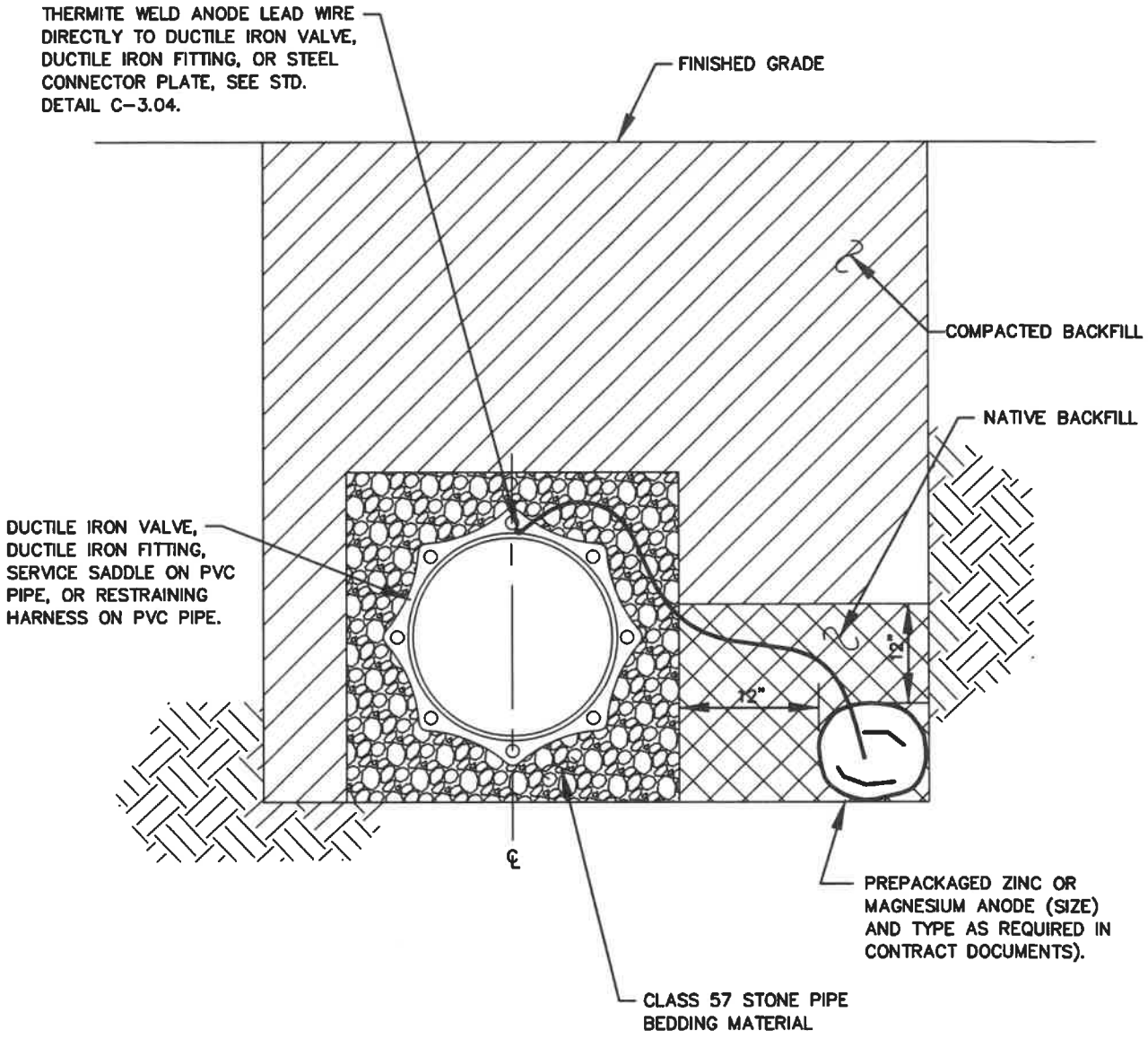


SIDE VIEW

NOTES:

1. CONNECTOR PLATE TO BE THERMITE WELDED TO ANODE LEAD WIRE PRIOR TO ATTACHING CONNECTOR PLATE TO RESTRAINING HARNESS, TAPPING SADDLE, OR SERVICE SADDLE.
2. THERMITE WELDS SHALL BE COATED WITH A PREFABRICATED ONE PIECE PLASTIC CAP FILLED WITH ELASTOMETRIC MATERIAL, ROYSTON HANDY-CAP OR APPROVED EQUAL.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC AWWA C-900 PIPE CONNECTOR PLATE	C 7.12

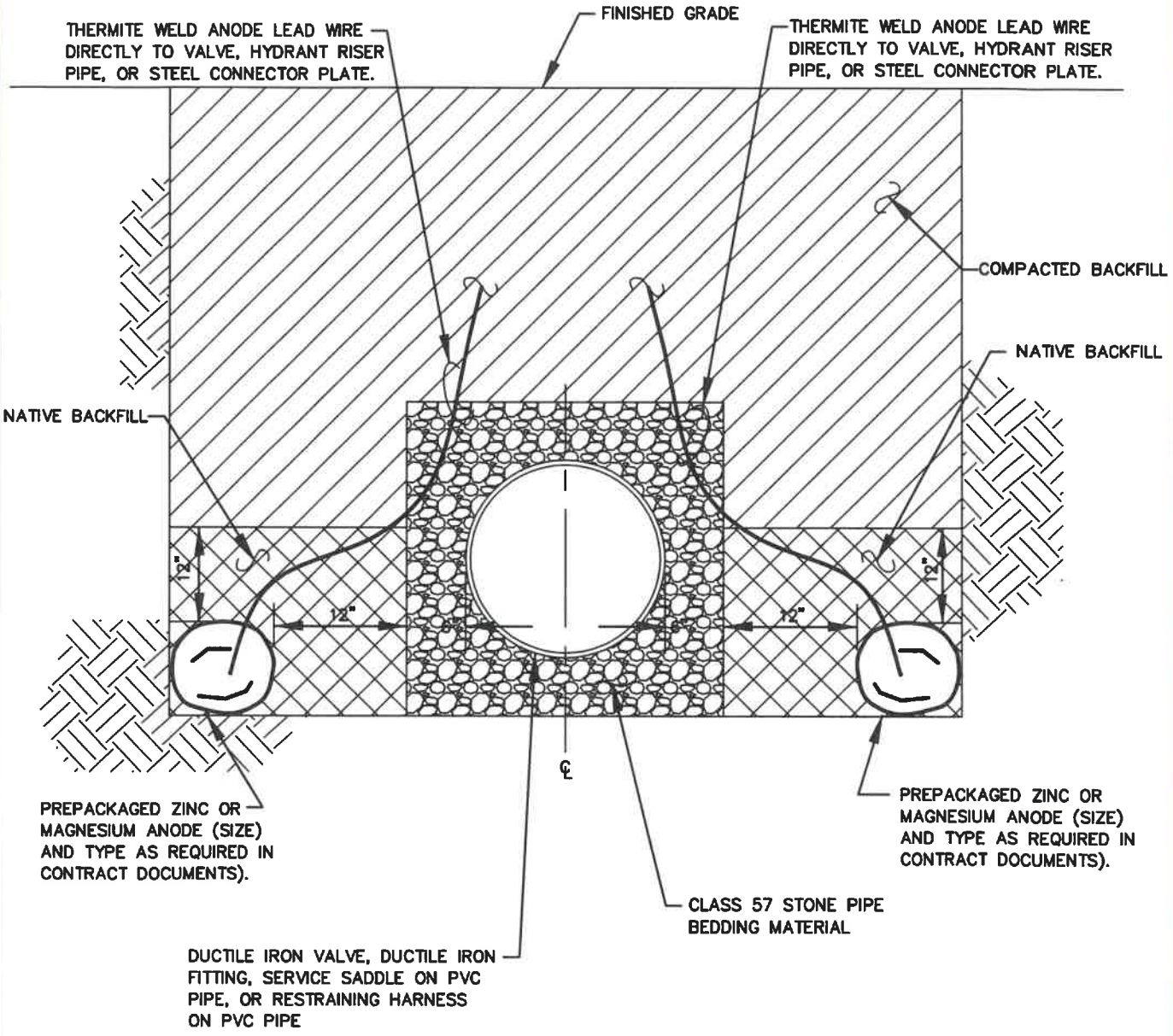


NOTES:

1. INSTALL ANODES A MINIMUM OF 12 INCHES FROM PIPE.
2. BACKFILL ANODES WITH NATIVE SOIL FOR A MINIMUM OF 12 INCHES ON ALL SIDES. DO NOT BACKFILL ANODES WITH SAND OR STONE.
3. DO NOT THERMITE WELD TO PVC PIPE.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Mike Harrison Chief Engineer	STANDARD DETAIL PVC MAIN SINGLE ANODE PLACEMENT	C 7.13

C713



NOTES:

1. WHEN INSTALLING ANODES AT HYDRANTS, ATTACH ONE ANODE TO SHUT-OFF VALVE, AND ONE ANODE LEAD TO HYDRANT RISER PIPE, SEE STD. DETAIL C-5.09.
2. INSTALL ANODES A MINIMUM OF 12 INCHES FROM PIPE.
3. BACKFILL ANODES WITH NATIVE SOIL FOR A MINIMUM OF 12 INCHES ON ALL SIDES. DO NOT BACKFILL ANODES WITH SAND OR STONE.
4. DO NOT THERMITE WELD TO PVC PIPE.

WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: 7-26-21 Chief Engineer	STANDARD DETAIL PVC MAIN MULTIPLE ANODE PLACEMENT	C 7.14