

LEGEND

	EXISTING
	CONTRACT 3
	CONTRACT 4

- INSULATING FLANGE TEST STATION
- ANODE GROUNDBED TEST STATION

NOTES:
 1. PROPOSED GROUNDBED LOCATIONS ARE FOR REFERENCE ONLY. FIELD VERIFICATION IS REQUIRED BEFORE INSTALLING ANODE GROUNDBEDS.
 2. TYPE F TEST STATIONS ARE REQUIRED AT ALL UNDERGROUND ELECTRICALLY ISOLATED FLANGE CONNECTIONS.

NO.	DATE	REVISION	APPROV.
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EAST SIDE WTP 540 MGD EXPANSION - PART B
 CONTRACT 3 - NW & SW CLEARWELLS & FLUMES
 CONTRACT 4 - NE & SE CLEARWELLS (ALTERNATE)
 GALVANIC ANODE CATHODIC PROTECTION SYSTEM
 PROPOSED INSTALLATION LAYOUT

DALLAS WATER UTILITIES
 CITY OF DALLAS, TEXAS

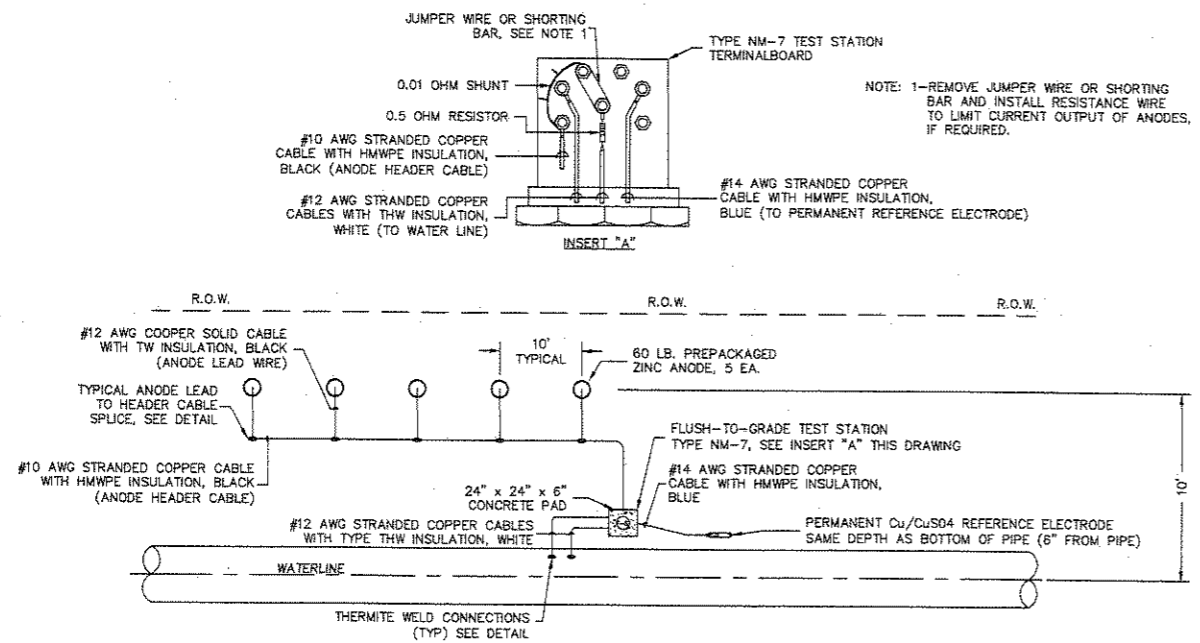
TCB AECOM
 TURNER COLLIE & BRADEN
 17300 DALLAS PARKWAY, SUITE 1010
 DALLAS, TEXAS 75248-1157
 WWW.TCB.AECOM.COM

DESIGN	RS	CONTRACT NO.	DWG. NO.
DRAWN	FM	08-155	C-T-101
CHECKED	DK	FILE NO.	
APPROVED	RC	620Q-400R.3	179 of 210
DATE	MARCH 2008		

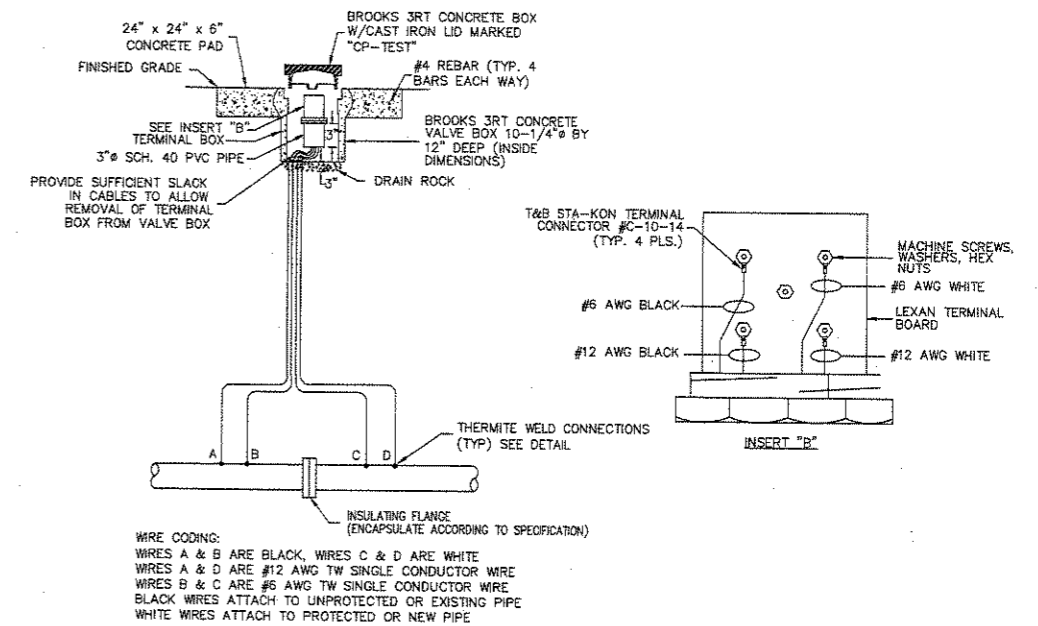
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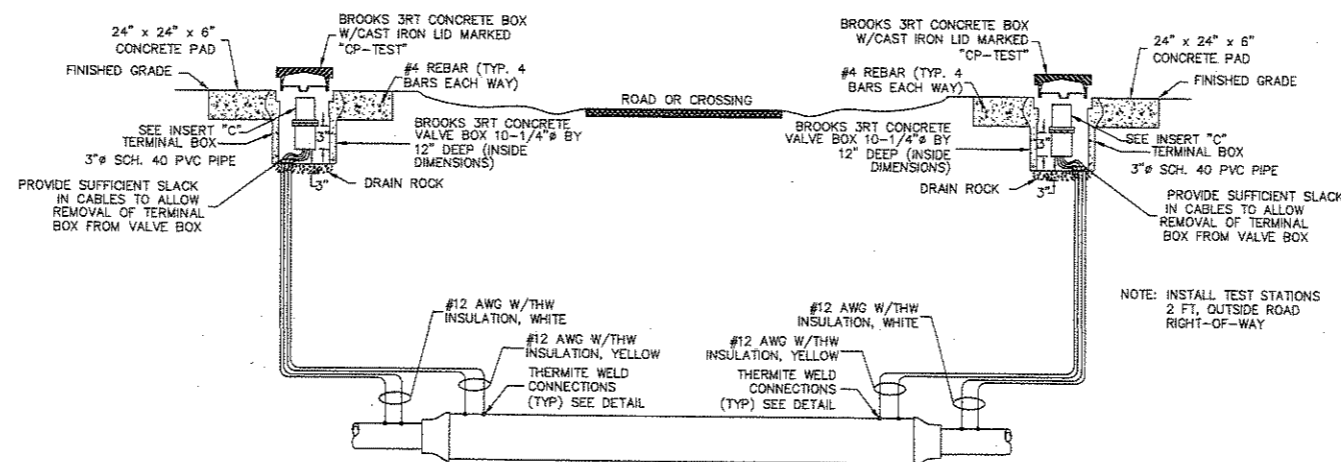
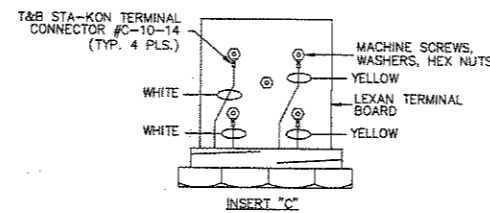




1 PIPE WITH ZINC ANODE AND TYPE TS TEST STATION INSTALLATION
C-T-501



2 FLUSH MOUNTED FLANGE ISOLATION TYPE IF TEST STATION INSTALLATION
C-T-501



3 TUNNEL OR CASED CROSSING TYPE CP TEST STATION INSTALLATION
C-T-501

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CONTRACT 3 - NW & SW CLEARWELLS & FLUMES
CONTRACT 4 - NE & SE CLEARWELLS (ALTERNATE)
GALVANIC ANODE CATHODIC PROTECTION SYSTEM
TEST STATION DETAILS

DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

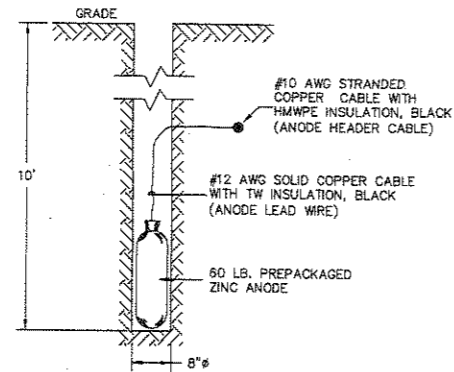
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DESIGN	RR	CONTRACT NO.	DWG. NO.
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APPROVED	RO	620Q-400R.3	180 of 210
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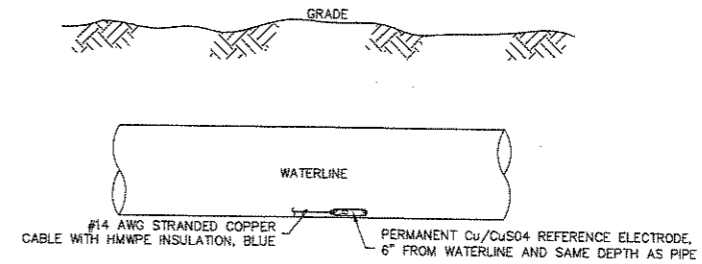
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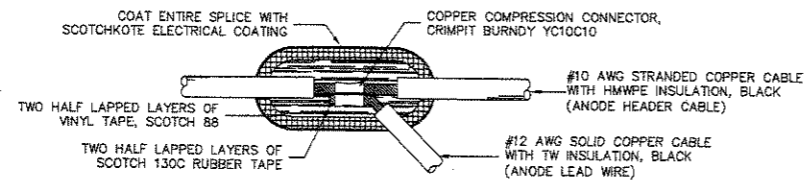




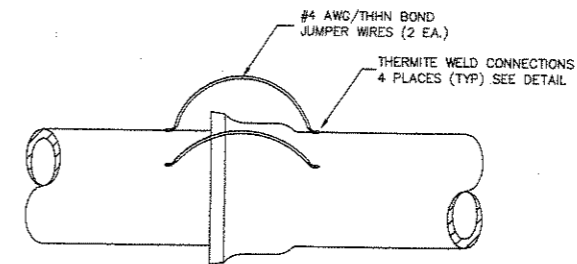
1 ANODE INSTALLATION
C-T-502



2 PERMANENT REFERENCE ELECTRODE INSTALLATION
C-T-502



3 ANODE LEAD TO HEADER CABLE SPLICE
C-T-502



4 TYPICAL BELL & SPIGOT BOND CONNECTIONS
C-T-502

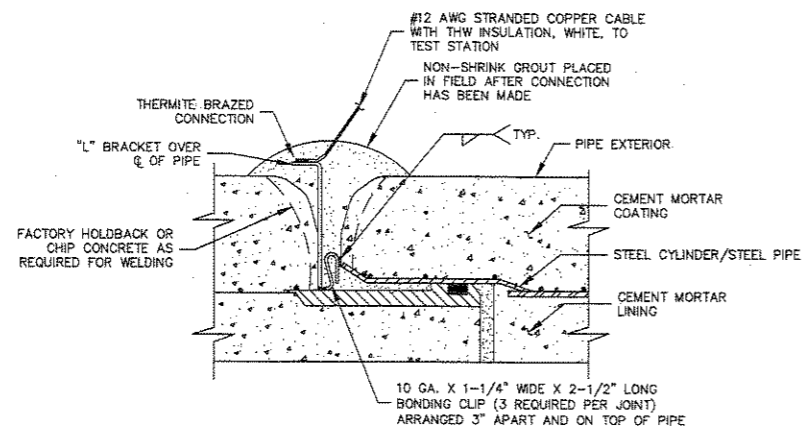
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DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
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DESIGN	RR	CONTRACT NO.	DWG. NO.
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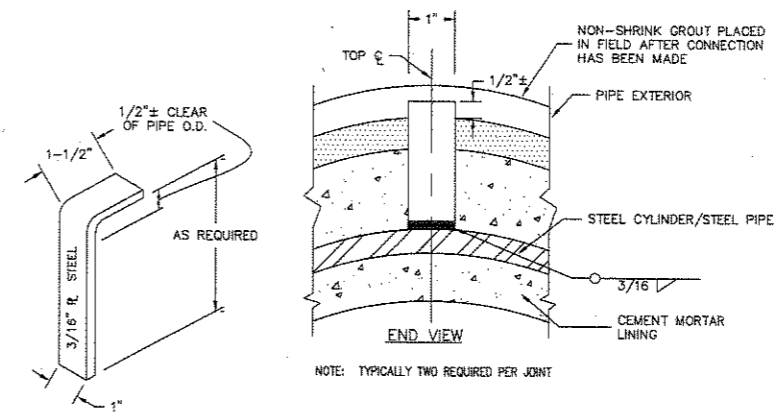
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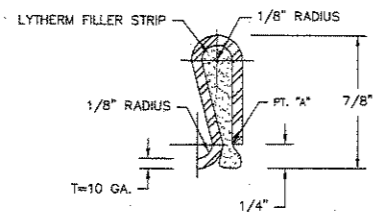
04.26.08



1 "L" BRACKET BONDING
C-T-503

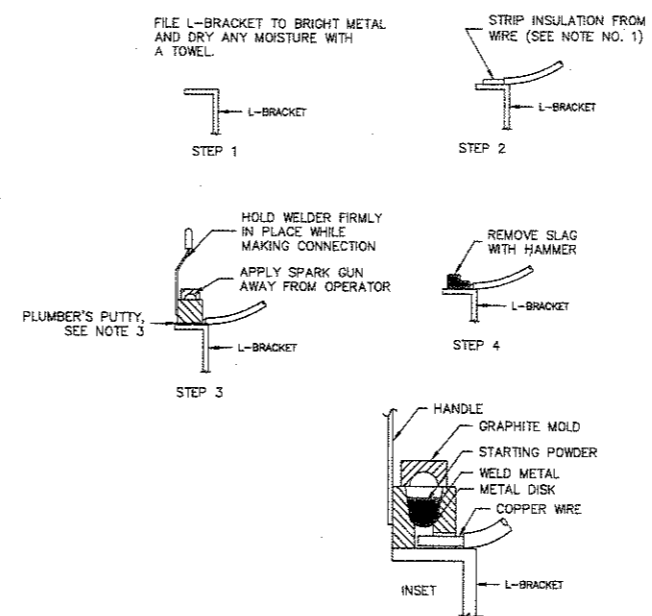


2 "L" BRACKET
C-T-503



- NOTES:
- STEEL BONDING CLIP:
MATERIAL SPECIFICATION ----- ASTM A36 (COMMERCIAL QUALITY)
CUT LENGTH ----- 2 1/2" ± 1/16"
WIDTH ----- 1 1/4" ± 1/16"
 - LYTHERM FILLER STRIP TO BE 1" x 1 1/2" WIDE TO OVERLAP SIDES OF CLIP.
 - CRIMP JUMPER OVER FILLER AT "A" TO COMPRESS FILLER CLOSE AT PT. "A" AS MUCH AS POSSIBLE WITHOUT CUTTING FILLER PAD.
 - BONDING CLIP TO BE INSTALLED ON EXTERIOR OF PIPE.
 - ARRANGE BONDING CLIPS ON TOP OF PIPE, 3 INCHES APART.
 - THREE REQUIRED PER JOINT (TYPICAL).

3 BONDING CLIP
C-T-503



- GENERAL PROCEDURE
- WHEN USING NO. 10 TO NO. 14 AWG SOLID OR STRANDED WIRE, IT WILL BE NECESSARY TO INSTALL A COPPER SLEEVE OF ADEQUATE SIZE OVER THE BARE END OF THE WIRE AND CRIMP IN PLACE BEFORE ATTEMPTING TO MAKE THE CONNECTION. THE WIRE SHOULD PROTRUDE AT LEAST 1/8" FROM THE END OF THE SLEEVE.
 - INSERT THE CONDUCTOR INTO THE MOLD NOTING ANY SPECIAL INFORMATION UNDER "POSITIONING" FOR APPLICATION TYPE IN THE MANUFACTURER'S INSTRUCTIONS PACKAGED WITH THE WELDER.
 - USE PLUMBER'S PUTTY TO SEAL ANY GAPS THAT MAY EXIST BETWEEN THE GRAPHITE MOLD AND THE L-BRACKET TO PREVENT THE WELD METAL FROM ESCAPING DURING THERMITE WELDING.
 - INSERT STEEL DISK IN BOTTOM OF CAVITY INSIDE MOLD. POUR THE WELD METAL INTO MOLD BEING CAREFUL NOT TO UPSET THE STEEL DISK. SQUEEZE THE BOTTOM OF THE TUBE TO LOOSEN ALL THE STARTING POWDER AND SPREAD IT EVENLY OVER THE WELD METAL. PLACE A SMALL AMOUNT OF STARTING POWDER ON THE TOP EDGE OF THE MOLD UNDER THE COVER OPENING FOR EASY IGNITION.
 - CLOSE COVER AND IGNITE WITH THE FLINT GUN. MOVE THE FLINT GUN AWAY QUICKLY TO PREVENT FOULING. IF FLINT GUN SHOULD BECOME FOULED, SOAK IT IN HOUSEHOLD AMMONIA.
 - AFTER IGNITION HOLD THE WELDER IN PLACE FOR A MOMENT TO ALLOW THE WELD TO SOLIDIFY. AFTER THE WELD HAS COOLED, REMOVE THE SLAG WITH A CHIPPING HAMMER OR WIRE BRUSH.
 - COAT CONNECTION AND THE ENTIRE PREPARED SURFACE.
 - CLEAN THE COVER EVERY 6 TO 10 WELDS.
 - WET OR DAMP MOLDS WILL PRODUCE POROUS WELDS. MOLDS MUST BE DRIED OUT BEFORE ATTEMPTING TO WELD.
 - CONNECTIONS ARE TO BE PLACED A MINIMUM OF 3" APART. UNSUCCESSFUL WELDS ARE TO BE ABANDONED AND MOVED TO ANOTHER PREPARED SURFACE NOT LESS THAN 3" AWAY.

4 THERMITE WELD CONNECTION
C-T-503

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