

SCOPE: THIS STANDARD SHOWS SOLVENT CEMENT JOINING AND P.V.C. PLASTIC CONDUIT INSTALLATION.

## INSTRUCTIONS FOR SOLVENT CEMENT JOINING AND INSTALLATION OF P.V.C. PLASTIC CONDUIT AND FITTINGS

ALL PLASTIC CONDUIT AND FITTINGS TO BE JOINED SHALL BE EXPOSED TO THE SAME TEMPERATURE CONDITIONS FOR A REASONABLE LENGTH OF TIME BEFORE ASSEMBLY.

### SOLVENT CEMENT JOINING

MAKE CERTAIN THAT ALL FOREIGN MATTER HAS BEEN WIPED FROM BOTH THE CONDUIT AND FITTING (AT JOINT). THE CONDUIT SHOULD BE INSERTED DRY NOT OVER HALFWAY INTO THE FITTING TO MAKE A GOOD INTERFERENCE SOLVENT CEMENT JOINT. INSPECT CEMENT CONTAINER FOR PROPER CHECK DATE. CEMENT OVER 12 MONTHS OLD **SHOULD NOT BE USED**. ABS CEMENT **SHALL NOT BE USED** ON PVC CONDUIT.

APPLY A LIBERAL AND UNIFORM COAT OF CEMENT TO THE MATING ZONE OF THE FITTING AND CONDUIT. IT MUST BE EMPHASIZED THAT MOST JOINT FAILURES ARE CAUSED BY DRY JOINTS WHERE AN INSUFFICIENT COATING OF CEMENT IS APPLIED, OR WHEN CEMENT HAS EVAPORATED DUE TO HIGH TEMPERATURE CONDITIONS. WORK FAST! SLIP CONDUIT STRAIGHT INTO THE FITTING WITH A SLIGHT TWIST UNTIL IT BOTTOMS. HOLD THE JOINT FOR 15 SECONDS (ONE MINUTE IN EXTREME COLD WEATHER) SO THAT THE CONDUIT DOES NOT PUSH OUT OF THE FITTING. DO NOT TWIST OR DRIVE CONDUIT AFTER INSERTION IS COMPLETE. THE JOINED MEMBERS SHALL BE CURED FOR FIVE MINUTES OR MORE BEFORE THEY ARE HANDLED. (IN COLD OR DAMP WEATHER, THIS INTERVAL SHOULD BE INCREASED TO ALLOW FOR THE SLOWER EVAPORATION OF THE SOLVENT.) MINIMUM TRENCH WIDTHS MAY BE UTILIZED BY ASSEMBLING CONDUIT ABOVE GROUND (ALLOWING FOR CEMENT CURE PERIOD) AND LOWERING THE PREASSEMBLED CONDUIT BANK INTO THE TRENCH.

BE SURE TO WIPE OFF THE EXCESS CEMENT THAT IS LEFT ON THE OUTER SHOULDER OF THE FITTING. CARE SHOULD BE EXERCISED TO PREVENT EXCESS CEMENT FROM BEING FORCED INTO THE FITTING AT THE INSIDE SHOULDER OF THE CONDUIT. PLASTIC BRISTLE BRUSHES SHOULD NOT BE USED. (THE CEMENT WILL DISSOLVE THE BRISTLES.) A LARGE BRUSH SHOULD BE USED WITH THE MAXIMUM SIZE PERMITTED BY THE WIDTH OF THE FITTING SOCKET.

CANS OF CEMENT SHOULD BE KEPT COVERED AND AWAY FROM EXCESS HEAT AND FLAMES WHEN NOT IN USE. QUART CANS ARE GENERALLY THE LARGEST PRACTICAL SIZE TO USE SINCE THE CEMENT DRIES RAPIDLY. USE ONLY SOLVENT CEMENT AS FURNISHED OR RECOMMENDED BY THE CONDUIT MANUFACTURER. SOLVENT CEMENT THINNER, MAY **NOT** BE USED FOR THINNING CEMENT WHICH HAS THICKENED.

RENUMBERED FROM CU 1600-95M, SH. 1, DTD. 01-89

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| <b>CITY OF ANAHEIM</b><br>PUBLIC UTILITIES DEPARTMENT<br>ELECTRICAL DIVISION<br>T&D CONSTRUCTION STANDARDS |           | REVISION KEYS:  | ADDED / REVISED TEXT | ADDED / REVISED MATERIAL | NEW SHEET   |
|  |           | <b>SOLVENT CEMENT JOINING<br/>AND P.V.C. PLASTIC<br/>CONDUIT INSTALLATION</b> |                      |                          | REVISION NO. <b>2</b><br>ISSUE DATE: <b>01-08</b><br>SHEET <b>1</b> OF <b>2</b><br>CONSTRUCTION STANDARD:<br><b>CU 1600-96M</b> |
| APPROVALS  |           |   |                      |                          |   |
| T&D MGR  | FIELD MGR | OPER. MGR   |                      |                          |   |
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# INSTRUCTIONS FOR SOLVENT CEMENT JOINING AND INSTALLATION OF P.V.C. PLASTIC CONDUIT AND FITTINGS (CONTD.)

## CUTTING CONDUIT

USE A FINE TOOTHED SAW OR RACHET TYPE CUTTER TO CUT CONDUIT LESS THAN TWO INCHES IN DIAMETER. A FINE-TOOTH WOOD SAW SHOULD BE USED ON CONDUIT ABOVE TWO INCHES IN DIAMETER. THE CONDUIT MUST BE CUT STRAIGHT AND CLEANED OF BURRS. CONDUIT TRANSITIONS FROM SCH. 80 OR SCH. 40 TO TYPE EB CONDUIT MUST BE CHAMFERED ON INSIDE EDGE. USE KNIFE OR HALF ROUND FILE.

## BENDS AND SWEEPS

IN CASES WHERE A JOINT IS MADE UNDER STRESS, DUE TO MISALIGNMENT, BENDS, OR OTHER FACTORS, THE JOINT MUST BE HELD RIGID IN SUCH A MANNER AS TO RELIEVE THE STRESS ON JOINT UNTIL THE CONDUIT IS BACKFILLED OR ENCASED.

## EXPANSION AND CONTRACTION

DUE TO EXPANSION AND CONTRACTION OF PLASTIC CONDUIT (ONE AND ONE-HALF INCHES PER 100 FEET FOR EVERY 20° F CHANGE IN TEMPERATURE), THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN:

- a. ALLOW EXTRA CONDUIT LENGTHS AT EACH TIE-IN FOR EXPANSION OR CONTRACTION.
- b. BACKFILL FROM CENTER OF TRENCH BOTH WAYS OR FROM ONE TIE-IN POINT TOWARD THE OTHER END OF THE TRENCH.
- c. CONDUIT MUST BE CUT TO CORRECT LENGTH FOR TIE-IN AFTER BACKFILL IS COMPLETE AND EXPANSION OR CONTRACTION HAS STABILIZED. ALL CONDUIT TIE-INS ENTERING MANHOLE, VAULT, OR PULL BOX WALLS SHALL BE GROUTED INTO PLACE AND CONCRETE ENCASED FOR A DISTANCE OF 12 TO 15 INCHES OUTSIDE THE WALLS.

## HANDLING

TO MINIMIZE ACCIDENTAL MECHANICAL DAMAGE, CONDUIT SHOULD NOT BE LEFT EXPOSED IN AN OPEN TRENCH LONGER THAT IS ABSOLUTELY NECESSARY. IN TRANSPORTING LONG LENGTHS OF CONDUIT, PROVISION SHOULD BE MADE TO SUPPORT THE FULL LENGTH TO AVOID DAMAGE DUE TO EXCESSIVE OVERHANG.

CONDUIT THAT IS TO BE STORED IN EXCESS OF TWO WEEKS PRIOR TO INSTALLATION SHALL BE PROTECTED FROM THE SUN. PROTECTION MAY CONSIST OF TARPS OR OTHER OPAQUE COVERINGS.

CONDUITS SHALL NOT BE STACKED IN EXCESS OF 42 INCHES FOR STORAGE IF STORAGE IS TO EXCEED TWO WEEKS DURATION.

RENUMBERED FROM CU 1600-95M, SH. 2, DTD. 12-88

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| <p><b>CITY OF ANAHEIM</b><br/>PUBLIC UTILITIES DEPARTMENT<br/>ELECTRICAL DIVISION<br/>T&amp;D CONSTRUCTION STANDARDS</p>   | <p>REVISION KEYS:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; border: 1px solid black; background-color: #cccccc;"></td> <td style="font-size: 8px;">ADDED / REVISED TEXT</td> <td style="width: 20px; border: 1px solid black; background-color: #cccccc;"></td> <td style="font-size: 8px;">ADDED / REVISED MATERIAL</td> </tr> </table> |           | ADDED / REVISED TEXT     |           | ADDED / REVISED MATERIAL | <p><b>SOLVENT CEMENT JOINING<br/>AND P.V.C. PLASTIC<br/>CONDUIT INSTALLATION</b></p> |  |  |              |   |              |       |       |        |                        |             |
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