





5#

SECTION 33 30 00  
WATER DISTRIBUTION SYSTEM

PART 1 GENERAL

! ! " # \$ % & % \$ ! ! \$ ' % \$ % "

! % % \$ % % " ' ( ! " ! ) (

& % ( \$ % ! ) \* % ! + \* , !-

. . / " 0 " ".1 "+2 3 1 ", 4 " "

" & ! ! . \$ % % " % ( ! !

56 7 "( \* ' " %

8 6 " %) % " ! \$ % & ! % ! ! % )

+ 9 \* 8 6,

8 5 : ! \$ % ! % ! ! % ! ! ) ; ' ! & % !

; 6 ! & % ! +2 ! / ! , \$ % : ) !

& % 4 % 4 % / ! ! ! + 4 4 , !-

6 & \* % % ) \$ % 8 % " ; ) ! \$ % 4 %

+ 9 4 4 6,

2% ( % " 8 % ; ) ! . % ) 6 < . \$ % 4 %

" % = " ! + ,

7 % 2 ! / : ! \$ % 8 % " 2% ( % % ! ! %

" ; ) ! + 9 4 4 ,

> ; ) " 8 % " 2% ( % # % " " ; ) !

> 8 % . % \$ ) ( ! \* \* " ! % " "

\* " ! . \$ % 4 % % % = " !

> 5 7 ! " 2 ? 3 ! \$ % 4 % " # % ) ( ! & !

@ ! \$ 2% ( " 8 ! % 4 % \* ! "

% ! + 9 4 4 @ ,

@> 8 ! \$ ) 4 % \* !

6 " 4 % \* % ! % % ( \$ % \* !

5 (3 ( % " + ? , % !! % . 6 % ) \$ %  
4 % 8 ! %

5 ( ( + , % !! % . ) . " ; ) ! . 9  
% ) . \$ % 4 %

5 > (3 ( % " + ? , 4 % % ! & !! . &  
8 & % ! 6 % ) @

2 7 7 A 7 \*

\* \$ % % ! 8 - & & \$ % % ! ! " % " % # ) ! % ) ! \$  
\$ # ) & ! . ' # % % ! \$ " . " " # " !  
\$ # ) & % ! \$ % & ! \$ ! -

" ; ) !

: ! " ) ! . " ) ) ! / ! \$ % C !

? 3 !

6 % % ! . % ! . D "" !

6 ? 3 ' !

> % % 4 %

8 ? 7E. 7 2 . 8 0 8 2 ; \* 7

8 3 % ( " % ) - ! & % ! " 3 % " ! \$ % " & ) " " ! %  
# & & & " ) % & % ! ! ! ! % ! % " % % 3

2.3678(")53536( )-0.950.956)4 17(%) -536( )-" 9! ) "% % ) ! / ! " % 3 % \$ " % % "

PART 2 PRODUCTS

2 \* 7 ; 7 4 7 8 7 \*

(3 ( % " + ? , ! )+8 & % # 6 ! " !,-

" ; )!- ! \$ %& 4 4 5 . % !! % !! >+87 < ,



2 % 7 = % & !- ! % = % & !! ( !  
' # % ! \$ ' ! & " H 7 = % & ! H % )% !  
% " %

% # %/- 8 % # %/ %" # . H % # %/ \$ %  
!H

( ) " : )- 4 % !( ! & ! ! " %" #  
4 4 @ 5 . \$ )!. 3 3 !. " !! %

: )- \* / C ! \$ % # )! " % % % )! % 3 ! ( ! \$ " \$ % C ! # ! G !! & ! C ! % " # % = % & ! \$ 4 4 5 \$ % C ! \* / & C ! # " \$ )!. 3 3 !. " % !! % ! \* / & C ! # ) "!. ) !/ !. !. " ! % 3 ! ( ! \$ " \$ % ! ( C G !! & ! C ! % " # % = % & ! \$ 4 4 5 \$ % C !! & ( " # % && " ! \$ " ' 4 4 / ! % !! % % % % % ) ) !/ . & # % )% 3 \$ % ). ! ! " C !! & C ! & " # ! 3 ( & )! % " # % && " ! \$ )& \$ % % . ! % 3 "

% ) - % 3 " % % ! /! % ! /!! ! " " \$ % % % % ! / ) " )) ) \$ " " " ! ! % \$ % & ) \* 56 3 ) & & & & % !! 3 ! % ) \$ .> ! < " ( !

7 = % & ! \$ % ! \$ 8 % % !! % !-

! . 2 % - ! " \$ )! % " # ) % = % & ! \$ % ! \$ ! " # % = % & ! \$ 4 4 @ \$ % ! . C !! & ( " 3 3 " \$ ) ! . ' ! % # ! ! \$ " % ! % )% ! % " %

: !- \* / \$ ) " C ! # ) !/ !. !. " ! % 3 ! ( ! \$ " \$ % ! ( C \* / \$ ) " C ! ) . / ) % 3 " " ! % \$ ) !. \$ )!. " % !! % ! ) ! \$ % \$ ) " C ! \$ ! 1 ! \$ % ! G ! \$ " % ! 1 " ! & / \$ % & ! ) & \$ ! % \$ % " % % ! # % & " 8 # " C ) \$ ) \$ ! \$ % ! " )% \$ ) " C & " # % ) # 3 % ! % ) \$ ) 4 ( \$ ) " % \$ ) ! " & ! ! " # & / ) \$ % % \$ ) " C !! \$ " ! % )% . % ( \$ % % " & ! ! !! & C ! & " # ! 3 ( & )! % " # % && " ! \$ )& \$ % % . ! % 3 "

% ) - % 3 " % % ! /! +% / ), \$ % % ) 1 " ! % ! /! ! " " ! % \$ % & ) \* 56 3 ) & & & & % !! 3 ! % ) \$ .> ! < " ( !

8 ! \$ ? 3 !- ! ) 3 3 ! % " # % = % & ! \$ 4 4 @ \$ % 3 3 " \$ ) ! \* / " !! & C ! ) 3 3 ! ! % 3 ! ( ! \$ " \$ % & / ) " !! & ) ! & ( C ! # " \$ )!

7 = % & ! \$ % ! \$ 4 % % 3 )-



! % " % & ) !! ! " ! ) " !  
! # %& " ( ! & )

!! % # ! " % " ( ) % . ! & ! /  
! & )

6 \$ \$ %& % % " " ! & ! . # % & ! % ! " % "  
% 3 \$ %& ! " " ( ! & . ! % 1 % " % & !  
% ! % " # 6 % ! \$ ) % & ( # % ! )  
# % ! % 1 ) \$ % 3 ! # " \$ \$ %& " %  
" " % ) !

> % \$ ' ! ) 3 3 ! ( % % # 3 " !! % ! )  
% ! % ) ! % 1 % " % ! \$ % ! % 1 % " % ! %  
& " !( ! & " ( ) % . % % #  
%& " ( 3 3 ! 8 ! % \$ % ! # 3 % ( )  
% 3 3 ! \$ % ! % 1

L ! % = % "

LL " " \$ ( \$ \$ % ) ) % " ! \$ 3 "

SECTION 33 40 00  
EXTERIOR SANITARY SEWER SYSTEM

PART 1 GENERAL

1.01 APPLICABLE PUBLICATIONS

C121 7 \$tile-Iron6 Centri' )all# Cast in \* etal \* olds or Sand-  
Lined \* olds6 'or : ater or Other Li; ids.

C<00 Installation o' 7 \$tile Iron : ater \* ains and Their  
A!! rtenan\$es

C/02 Pol#=in#l Chloride +P . C, : ater Trans " ission Pi!e6 No " inal  
7 ia " eters 10-in\$h thro )h 8<-in\$h

Uni-Bell Plasti\$ Pi!e Asso\$iation +UNI, P %li\$ations-

UNI-B-2 Installation o' Pol#=in#l Chloride +P . C, Se&er Pi!e

## 1.07 TESTS

- A. All tests required by the applicable specification shall have been performed whether specified in that specification or otherwise. For tests which are not specified in the applicable specification or performed at definite intervals, the tests shall have been performed within three years of the date of installation. The specification shall be in effect at the time of installation as is indicated or the contract.

## 1.07 DELIVERY AND STORAGE AND HANDLING \* MATERIALS

### A. Delivery and Storage-

1. Piping- Insulate materials delivered to site for delivery store with "in" or handling). Store materials on site in enclosed or under protective covers. Store materials in dry and well-ventilated areas under cover of direct sunlight. Do not store materials directly on the ground. Free inside of piles and fittings free of dirt and debris.
2. Prestressed Concrete Anchors- Handle prestressed anchor sections with care to avoid chipping and cracking. Store as directed. Protect prestressed anchors from the earth and elements weathering. Do not drill until needed. Use of "sonar" or prestressed anchors contain rust will not be permitted.
8. Handling- Handle fittings and other accessories in such a manner as to ensure delivery to the trench in good condition. Take special care not to include fittings or pipe and fittings in delivery. Delivery of fittings is delivered "as received" unless otherwise specified. Do not drill until needed. Do not leave materials and fittings that are not to be installed immediately in the sunlight. Do not store under cover of direct sunlight.

## PART 2 MATERIALS & PRODUCTS

### 2.01 G1A. IT > SE : E1 PIPING

#### A. Class Piping

1. Pipe and fittings- Pipe and fittings shall conform to ASTM \* C700 (extruded polyethylene) or other approved.
2. Joints- Joints materials shall conform to ASTM \*.

#### B. 7" Steel Iron Pipe and Associated Fittings-

1. Pipe and fittings- 7" steel iron pipe shall conform to A : : A C1216 Thickness Class 21. Fittings shall conform to A : : A C110E fittings with flange ends



8.08. SPECIAL 1EGUI1E \* ENTS 4O1 INSTALLATION O4 P . C PLASTIC PIPING

- A. Install pipe and fittings in accordance with the general requirements for installation of pipelines and with the requirements of UNI-B-2 (or later) and (in) pipe and fittings.
  - \* The joints with the joints must be sealed with this (in) pipe assembly these joints in accordance with the requirements of UNI-B-2 (or later) of joints.
  - \* The joints to other pipe materials in accordance with the requirements of the last pipe material.

8.02 4IEL7 TESTS AN7 INSPECTIONS

- A. Field Tests and Inspections General- The Engineer or inspector will witness all field tests specified in this section. The Contractor shall perform all field tests and provide all labor and incidental requirements for testing).
- B. Pipeline Testin)- Check each straight run of pipeline for visible deficiencies (holdings) a light in a "an hole" it shall show a reflection of light through the pipeline when viewed from the adjacent end of line.
- C. T . Inspection- The Contractor will perform a T . Inspection of the newly installed sections and is responsible for the cost of repairs required.

8.0< 7E4LECTION TESTING

- A. 7e'lection Testin)- P . .C. Gra=it# Se&er Onl#, 7e'lection shall be made not less than 80 days after the pipe has been installed and soiled and soiled. A (no-no) of sandrel shall be filled through the pipe by hand. All locations with deflection over 2 inches shall be excavated and reinstalled. Any pipe is to be tested to any method or process other than the normal high pressure test as per 117465( )-0 . 46T8-1 . 74405(s)-1 . 7465(')8

