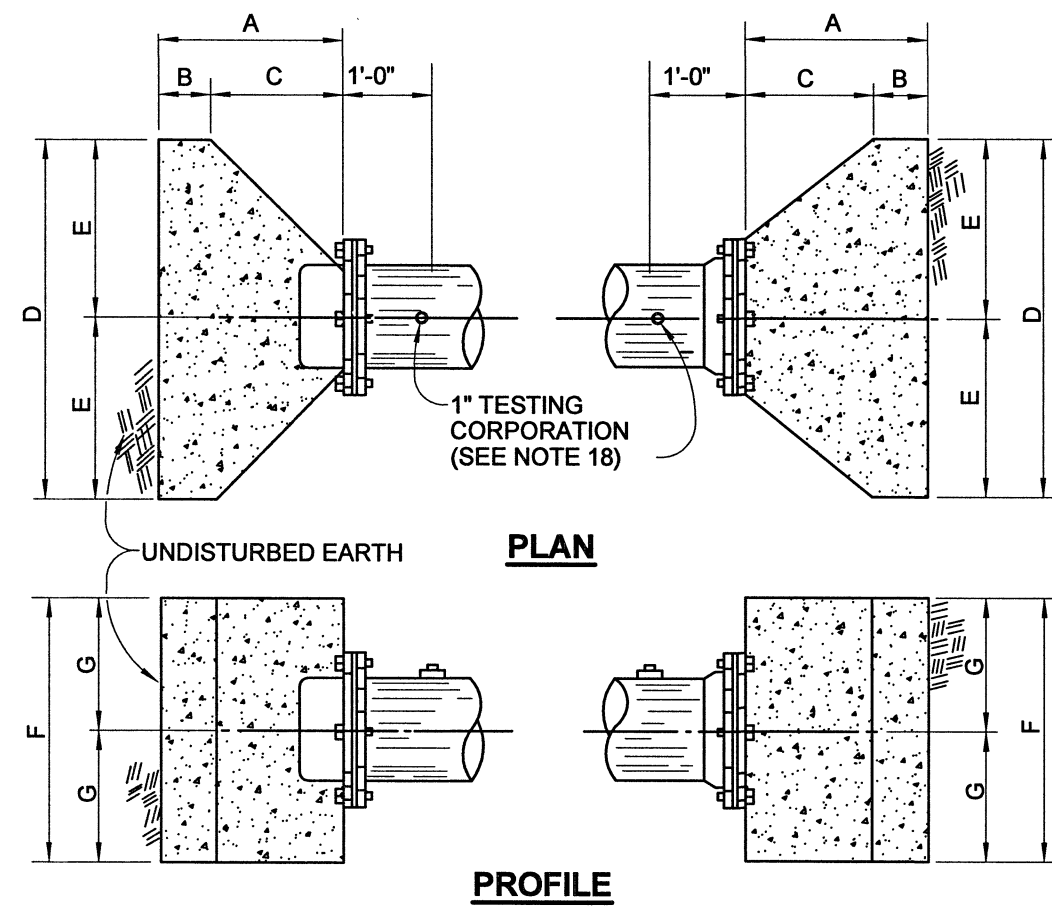


ANGLE	A (MIN.)	B (MIN.)	C	D	E	F	G	H (MIN.)	J
0°	45°	1'-2"	0'-9"	0'-9"	1'-5"	0'-9"	1'-5"	0'-9"	1'-2"
0°	90°	1'-6"	0'-9"	0'-9"	2'-0"	1'-0"	2'-0"	1'-6"	0'-10"
0°	45°	1'-8"	0'-9"	1'-0"	1'-2"	2'-0"	1'-0"	1'-11"	1'-4"
0°	90°	1'-0"	0'-9"	1'-0"	1'-4"	2'-0"	1'-0"	1'-11"	1'-2"
12°	22-1/2°	1'-8"	0'-9"	1'-0"	2'-8"	1'-3"	2'-0"	1'-4"	1'-4"
12°	45°	2'-1"	0'-9"	1'-4"	3'-6"	1'-9"	2'-6"	1'-3"	2'-4"
12°	90°	2'-1"	0'-9"	1'-4"	5'-2"	2'-9"	3'-0"	1'-8"	2'-4"
16°	22-1/2°	2'-8"	1'-0"	1'-8"	3'-4"	1'-8"	2'-9"	1'-3"	3'-0"
16°	45°	2'-8"	1'-0"	1'-8"	5'-4"	2'-8"	3'-0"	1'-6"	2'-6"
16°	90°	2'-8"	1'-0"	1'-8"	7'-0"	3'-0"	3'-0"	1'-6"	2'-8"
24°	90°	4'-2"	1'-0"	3'-2"	10'-0"	3'-0"	3'-0"	1'-6"	3'-4"

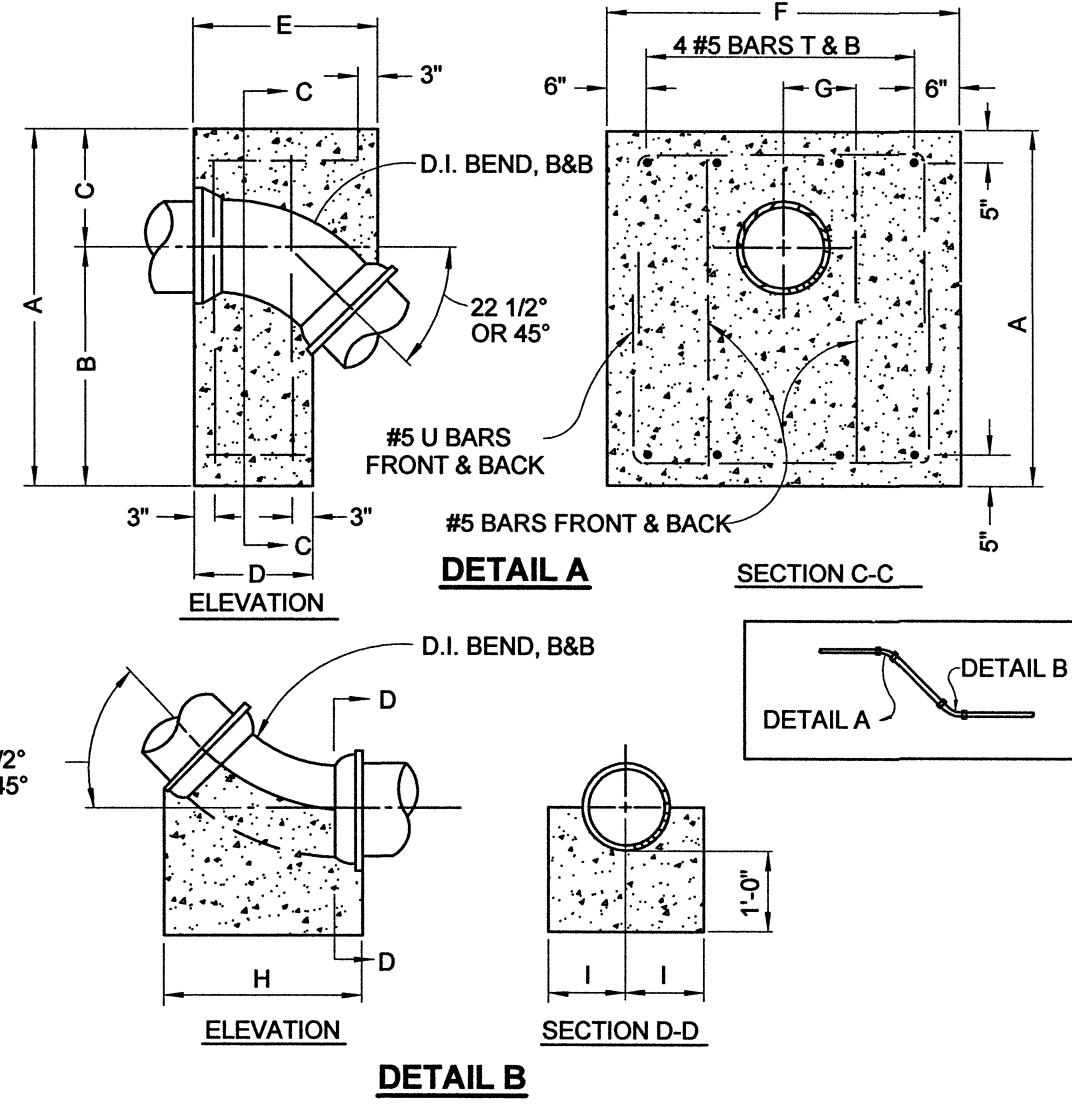
* 90° BENDS TO BE INSTALLED ONLY WITH WRITTEN APPROVAL FROM THE TOWNSHIP

CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS



SIZE	A MIN.	B MIN.	C	D	E	F	G
8"	1'-11"	0'-9"	1'-2"	3'-0"	1'-0"	2'-0"	1'-0"
12"	2'-1"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-0"
16"	2'-8"	1'-0"	1'-8"	5'-0"	2'-0"	4'-0"	2'-0"
24"	4'-2"	1'-6"	2'-8"	6'-0"	3'-0"	4'-0"	2'-0"

CONCRETE THRUST BLOCKS FOR CAPS



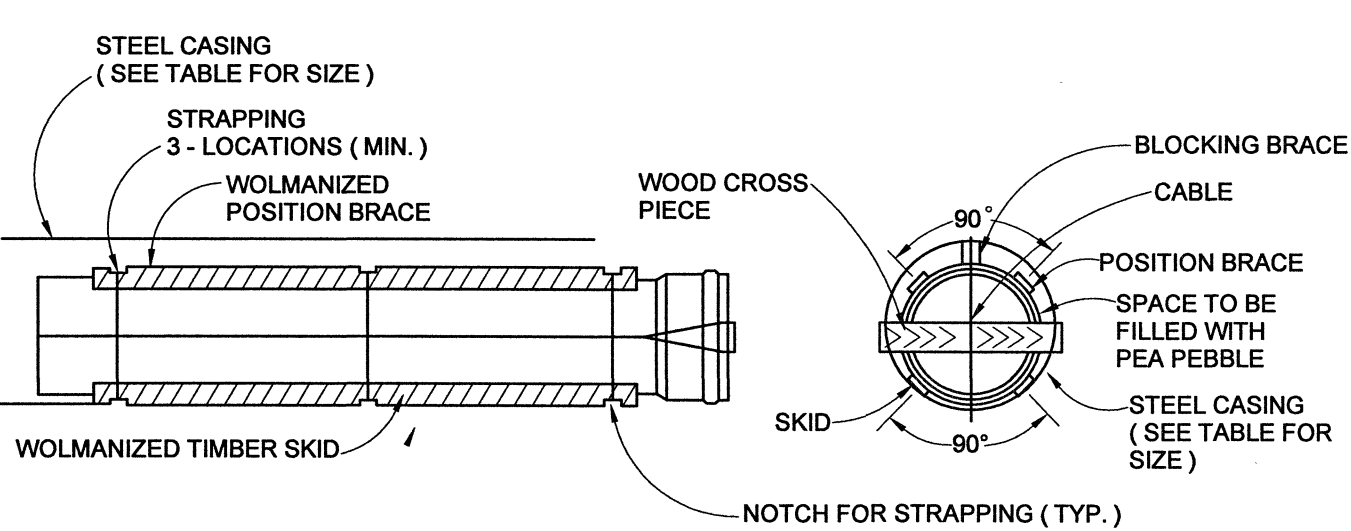
CODE	TEE SIZE		
	8"x8"	12"x12"	16"x16"
H	0'-9"	0'-9"	1'-0"
J	0'-9"	1'-3"	1'-4"
K	2'-8"	4'-0"	4'-9"
L	1'-4"	2'-0"	2'-4"
M	2'-0"	3'-0"	4'-8"
N	1'-0"	1'-8"	2'-4"
P	8"	2'-2"	1'-0"
R	12"	2'-4"	2'-10"
	16"	2'-10"	3'-4"
	8"	0'-7"	
	12"	0'-8"	0'-10"
	16"	0'-8"	0'-10"

NOTE - THRUST BLOCKS FOR 6" TEES SHALL MATCH THE REQUIREMENTS FOR 8" TEES.

CONCRETE THRUST BLOCKS FOR TEES

ANCHORAGE FOR VERTICAL BENDS

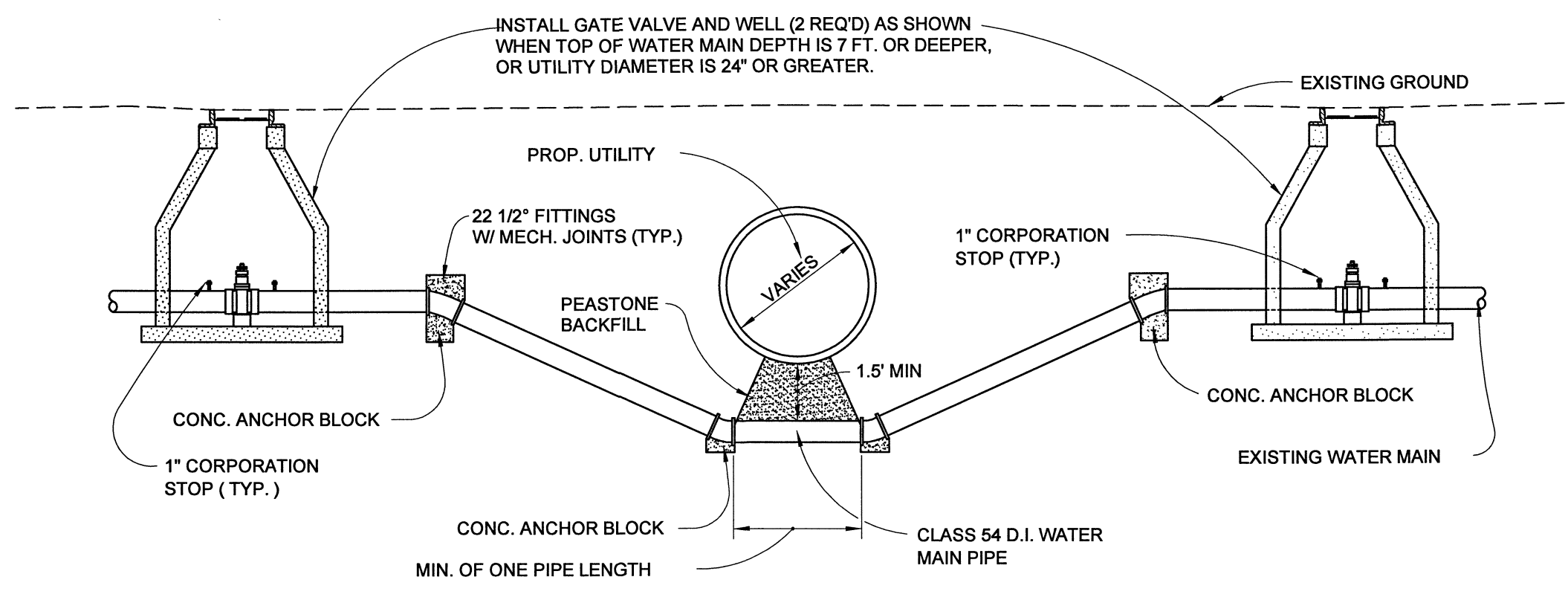
DIAM.	ANGLE	A	B	C	D	E	F	G	H	I
8"	22-1/2°	3'-0"	1'-8"	1'-4"	1'-4"	1'-7"	2'-8"	0'-8"	1'-9"	1'-0"
8"	45°	4'-0"	2'-6"	1'-6"	1'-8"	3'-2"	0'-10"	2'-0"	1'-0"	
12"	22-1/2°	4'-0"	2'-8"	1'-8"	1'-7"	2'-8"	0'-10"	2'-6"	1'-0"	
12"	45°	4'-6"	3'-0"	1'-6"	1'-6"	2'-4"	0'-11"	2'-6"	1'-0"	
16"	22-1/2°	4'-6"	2'-10"	1'-8"	1'-7"	2'-2"	0'-11"	2'-4"	1'-6"	



NOTE: THE ENDS OF THE CASING SHALL BE SEALED AFTER THE WATER MAIN IS INSTALLED THROUGH THE CASING

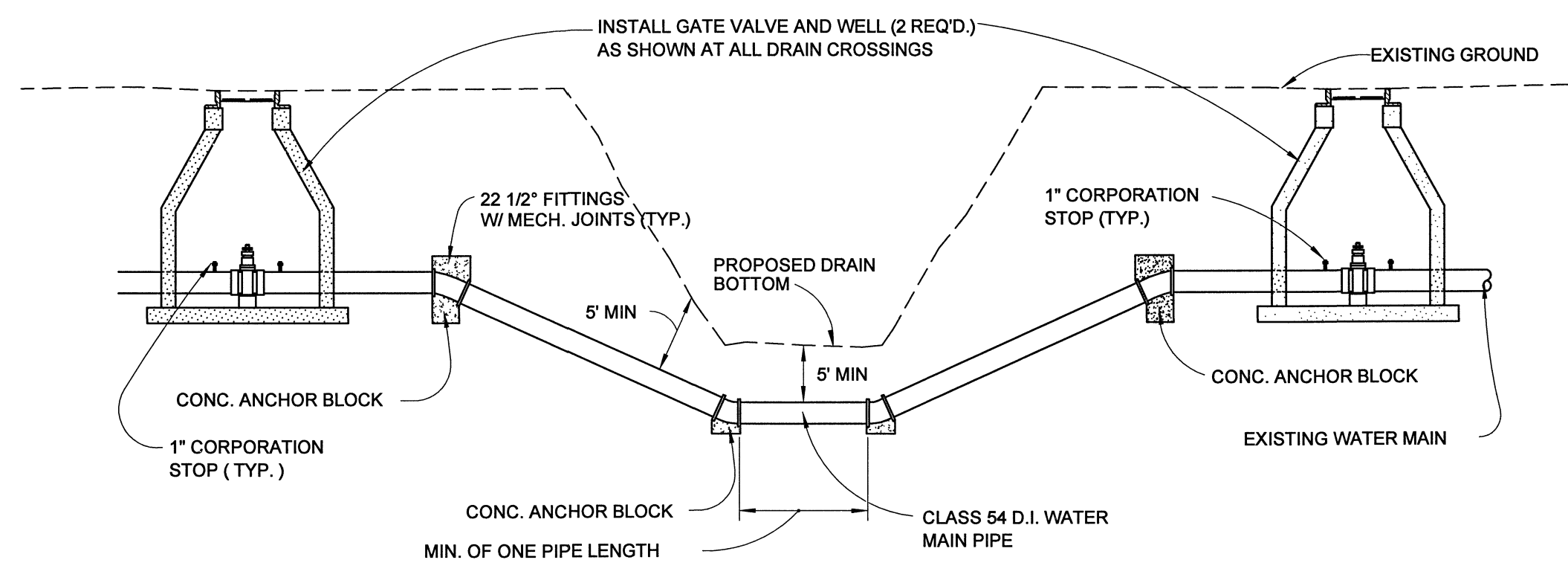
PIPE SIZE	RECOMMENDED MINIMUM CASING DIAMETER (O.D.)	MINIMUM CASING WALL THICKNESS
4"	12.75"	.375"
6"	14"	.375"
8"	16"	.375"
12"	20"	.375"
16"	24"	.406"
24"	36"	.532"

STEEL CASING REQUIREMENTS
NOT TO SCALE



VERTICAL ADJUSTMENT FOR WATER MAIN

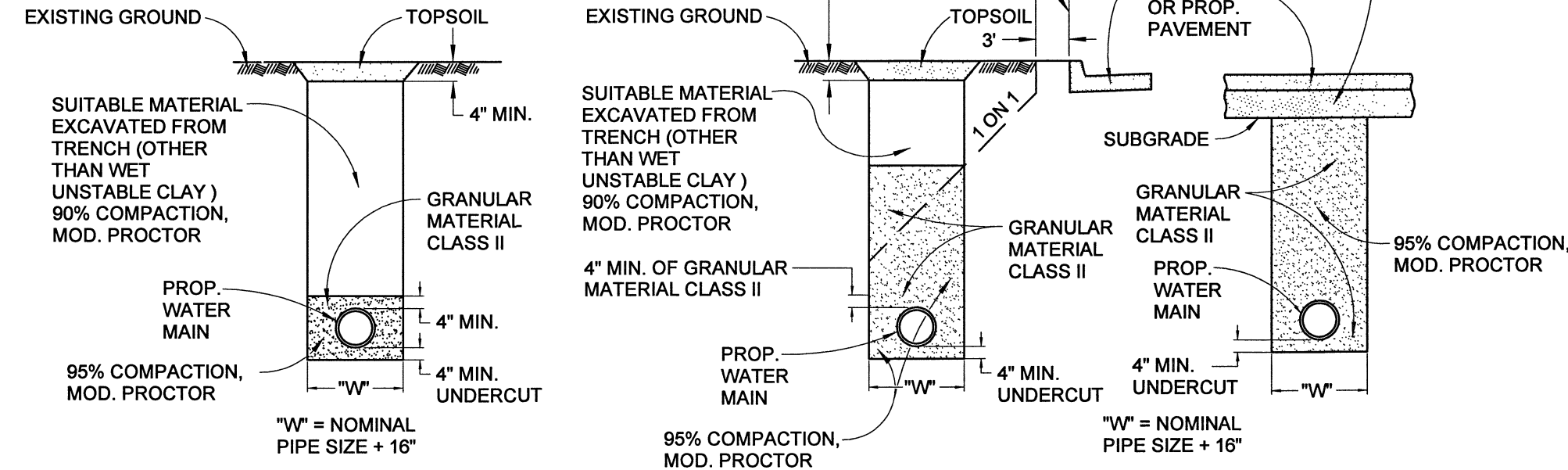
- NOTES:
1. USE STANDARD BEDDING
 2. SUBGRADE ELEVATION GIVEN ON PLANS.
 3. THE CONTRACTORS SHALL CHLORINATE AND PRESSURE TEST THE SECTION OF ADJUSTED WATER MAIN AT 150 P.S.I. PRIOR TO PLACING IN SERVICE.
 4. VERTICAL ADJUSTMENT OF EXISTING WATER MAIN INCLUDING GATE VALVES SHALL BE INCLUDED IN THE PROJECT.
 5. FIELD LOCK GASKETS SHALL BE REQUIRED WHERE MECHANICAL JOINTS ARE NOT USED. (USE OF FIELD LOCK GASKETS REQUIRES PRIOR APPROVAL OF THE TOWNSHIP.)



DRAIN CROSSING

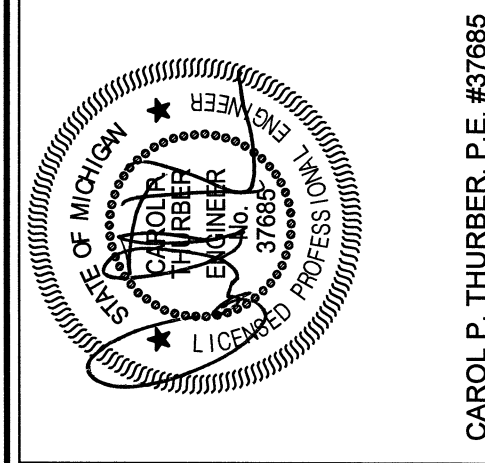
- NOTES:
1. USE STANDARD BEDDING
 2. SUBGRADE ELEVATION GIVEN ON PLANS.
 3. THE CONTRACTORS SHALL CHLORINATE AND PRESSURE TEST THE SECTION OF ADJUSTED WATER MAIN AT 150 P.S.I. PRIOR TO PLACING IN SERVICE.
 4. VERTICAL ADJUSTMENT OF EXISTING WATER MAIN INCLUDING GATE VALVES SHALL BE INCLUDED IN THE PROJECT.
 5. FIELD LOCK GASKETS SHALL BE REQUIRED WHERE MECHANICAL JOINTS ARE NOT USED. (USE OF FIELD LOCK GASKETS REQUIRES PRIOR APPROVAL OF THE TOWNSHIP.)

NOTE: MATERIAL SPECIFICATIONS SHALL COMPLY WITH M.D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.



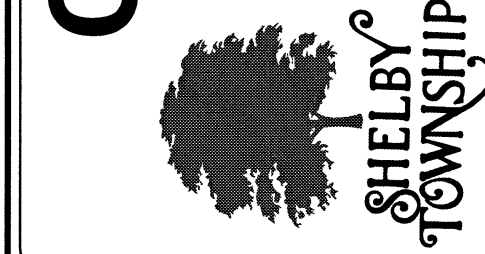
BEDDING DETAILS

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DEPARTMENT OF PUBLIC WORKS
APPROVED BY: *David G. Miller II*
DAVID G. MILLER II
DIRECTOR OF PUBLIC WORKS
DATE: JUNE 22, 2018

CHARTER TOWNSHIP OF SHELBY
STANDARD DETAILS FOR WATER MAIN (2 OF 2)



REVISED