



# Southeast Morris County Municipal Utilities Authority

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## CONCRETE THRUST BLOCK

### GENERAL

The Southeast Morris County Municipal Utilities Authority (referred to herein as the "Authority") is subject to the standard terms and conditions set forth by the Authority's Rules and Regulations, pursuant to N.J.S.A. 40:14B.

As a public water supply, the Authority is required to protect and provide safe drinking water to consumers in accordance with the N.J.A.C. 7:10 Safe Drinking Water Act Rules.

The Authority is committed to providing an efficient process for developers to achieve their project goals in accordance with the Authority's Rules and Regulations.

Developers interested in conducting business with the Authority shall comply with the standard terms and conditions mandated by the Authority's Rules and Regulations.

Developer shall mean applicant responsible for application, fees and contract agreement with the Authority.

### REFERENCE

ANSI/AWWA	American National Standards Institute/American Water Works Standards
C104/A21.4-13	Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
C110/A21.10-12	Ductile-Iron and Gray-Iron Fittings
C111/A21.11-12	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
C151/A21.51-09	Ductile-Iron Pipe, Centrifugally Cast
C502-05	Dry-Barrel Fire Hydrants
C509-09	Resilient-Seated Gate Valves for Water Supply Service
C511-07	Reduced-Pressure Principle Backflow Prevention Assembly
C651-05	Disinfecting Water Mains
C700-09	Cold-Water Meters – Displacement Type, Bronze Main Case
C702-10	Cold-Water Meters – Compound Type
C703-11	Cold-Water Meters – Fire-Service Type
ASTM	American Society for Testing and Materials
ASTM B88	Standard Specification for Seamless Copper Water Tube
N.J.S.A. 40:14B	New Jersey Statutes – Title 40 Municipal and County Utilities Authorities Law
N.J.A.C. 7:10	New Jersey Administrative Code – Title 7 Safe Drinking Water Act Rules
NSF	National Sanitation Foundation International Standard
NSF/ANSI 61	Drinking Water System Components – Health Effects
Rules and Regulations	The Southeast Morris County Municipal Utilities Authority's Rules and Regulations

## REQUIREMENTS

1. Developers shall verify that all submittals conform to local, county and state ordinances.
2. Road opening permits on local and county roads shall be obtained by the developer. State road opening permits shall be obtained by the Authority at the developer's expense.
3. All excavation and backfill shall be the responsibility of the developer.
4. Only authorized personnel of the Authority will be permitted to make connections to the water mains of the Authority, access and operate curb stops, hydrants and valves as mandated by the Rules and Regulations.
5. All proposed materials shall be submitted for approval. Failure to submit information shall cause the Authority to reject work and deny water service.
6. All materials submitted for approval shall be of first-class high-grade quality, clean and sound and conform to the latest revisions of ANSI/AWWA Standards. No inferior or low-grade materials will be approved or accepted.
7. All materials shall be approved for NSF/ANSI 61 for potable drinking water.
8. All materials shall be manufactured in the United States of America.
9. As-built drawings shall be prepared and submitted to the Authority on a CD in PDF and CAD format, indicating the location of all facilities installed before water is turned on.

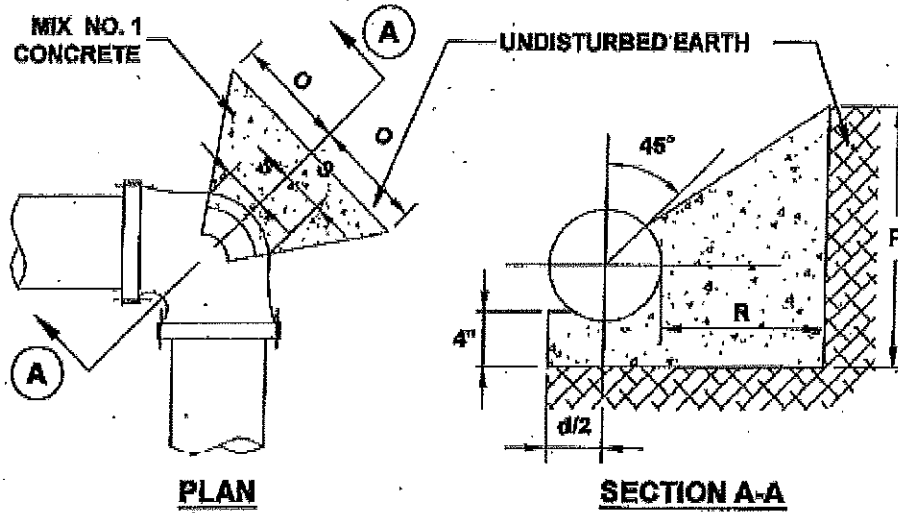
## SPECIFICATIONS FOR CONCRETE THRUST BLOCK:

All ductile iron fittings shall be braced and anchored by using concrete thrust blocks. At a minimum, the concrete thrust block shall be a class C (2500 lbs.). Fittings and bolts shall be protected from actual contact of concrete thrust blocks.

## APPENDIX L

DIA.	O	P	R	S
6"	1'-4"	1'-4"	1'-10"	8"
8"	1'-9"	1'-8"	1'-10"	7"
10"	2'-0"	1'-9"	2'-1"	6"
12"	2'-3"	2'-9"	2'-2"	8"

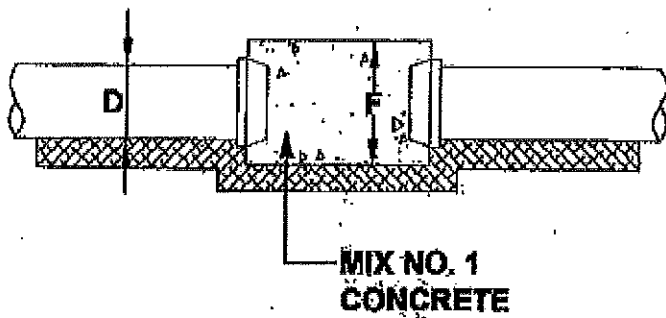
AREA OF BEARING =  $2 \times O \times P$



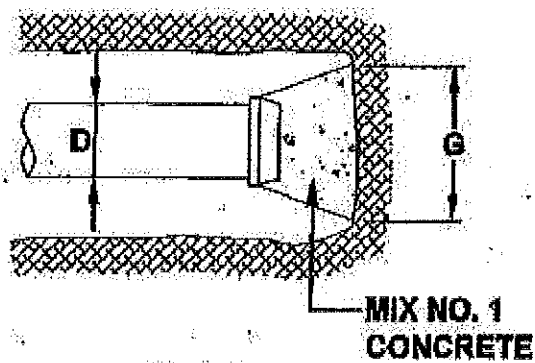
**THRUST BLOCK FOR 1/4 BENDS**  
**(200 psi)**

## Buttress for Caps and Plugs

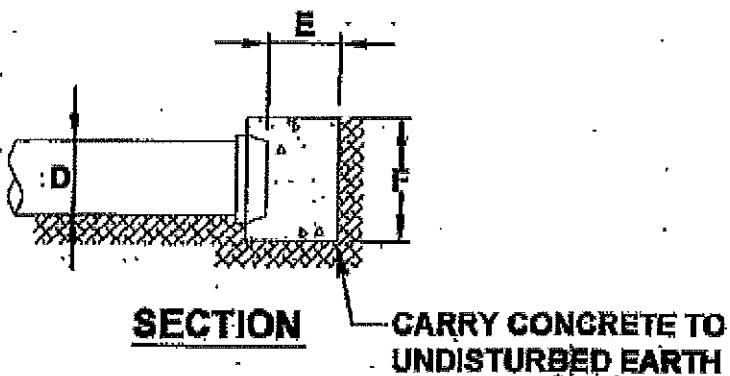
MINIMUM DIM. OF BUTTRESS FOR CAPS AND PLUGS				
	SIZE			
D	6"	8"	10"	12"
E	7"	9"	11"	13"
F	1'-1"	1'-5"	1'-9"	2'-3"
G	1'-7"	2'-2"	2'-8"	2'-9"



**DOUBLE CAP**



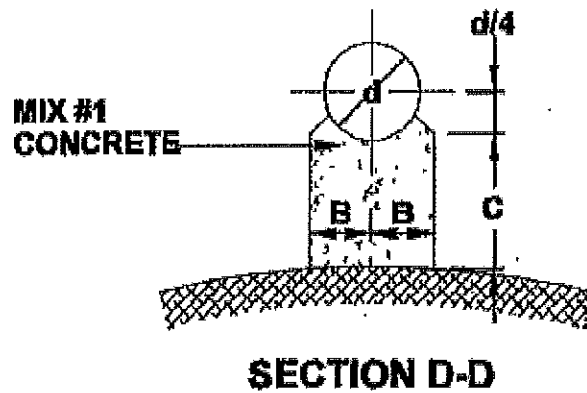
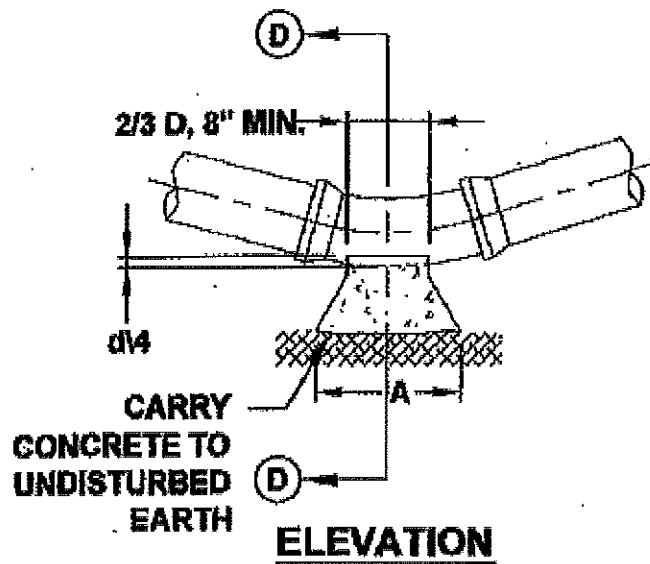
**PLAN**



**SECTION**

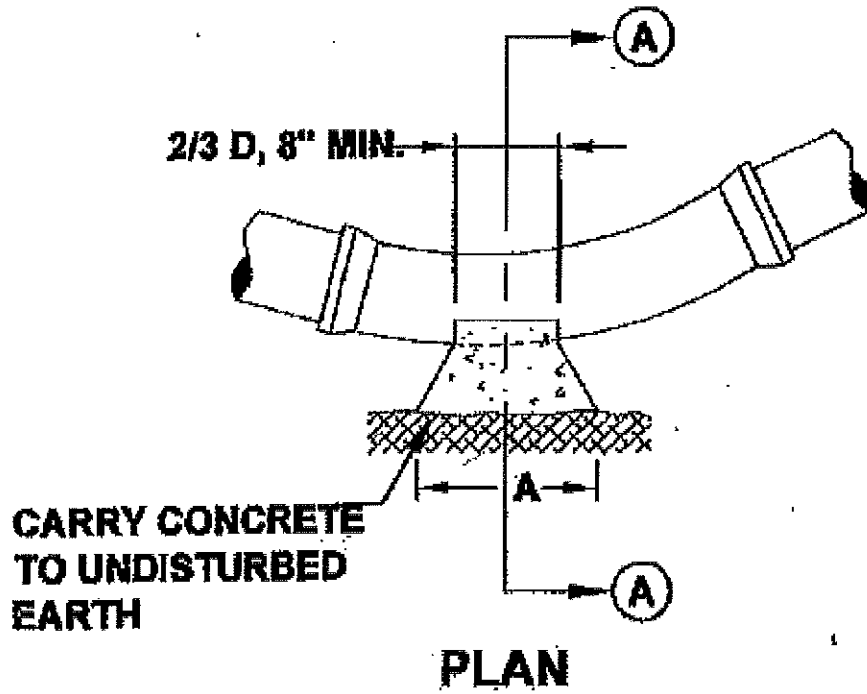
## Buttress for Vertical Bends

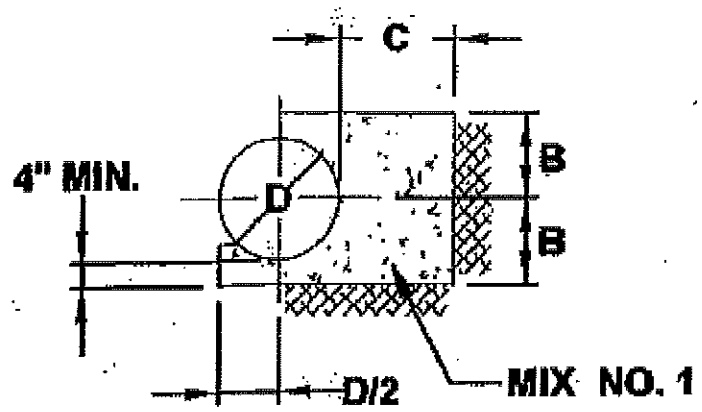
BUTTRESSES FOR VERTICAL BENDS								
BEND		SIZE						
		6"	8"	10"	12"	16"	20"	24"
1/64 (5-5/8*)	A						2'-3"	2'-8"
	B						1'-2"	1'-4"
	C						1'-2"	1'-4"
1/32 (11-1/4*)	A	8"	10"	1'-4"	1'-7"	2'-3"	2'-8"	3'-4"
	B	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-9"
	C	10"	10"	10"	10"	1'-2"	1'-2"	1'-4"
1/16 (22-1/2*)	A	1'-3"	1'-7"	2'-0"	2'-5"	3'-4"	4'-0"	4'-9"
	B	9"	10"	1'-0"	10"	1'-5"	1'-7"	1'-11"
	C	10"	1'-0"	1'-2"	1'-3"	1'-7"	1'-9"	2'-0"
1/8 (45*)	A	1'-11"	2'-5"	3'-2"	3'-9"	5'-0"	6'-3"	7'-5"
	B	9"	10"	1'-2"	1'-3"	1'-8"	2'-3"	2'-7"
	C	10"	1'-0"	1'-2"	1'-3"	1'-7"	1'-9"	1'-9"



*MINIMUM DIMENSIONS OF BUTTRESS FOR HORIZONTAL BENDS								
BEND	SIZE							
	6"	8"	10"	12"	16"	20"	24"	
1/64 (5-5/8*)	A					2'-3"	2'-8"	
	B					1'-2"	1'-4"	
	C					1'-2"	1'-4"	
1/32 (11-1/4*)	A	8"	10"	1'-4"	1'-7"	2'-3"	2'-8"	3'-4"
	B	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-9"
	C	10"	10"	10"	10"	1'-2"	1'-2"	1'-4"
1/16 (22-1/2*)	A	1'-3"	1'-7"	2'-0"	2'-5"	3'-4"	4'-0"	4'-9"
	B	9"	10"	1'-0"	10"	1'-5"	1'-7"	1'-11"
	C	10"	1'-0"	1'-2"	1'-3"	1'-7"	1'-9"	2'-0"
1/8 (45*)	A	1'-11"	2'-5"	3'-2"	3'-9"	5'-0"	6'-3"	7'-5"
	B	9"	10"	1'-2"	1'-3"	1'-8"	2'-3"	2'-7"
	C	10"	1'-0"	1'-2"	1'-3"	1'-7"	1'-9"	1'-9"

AREA OF BEARING =  $A \times 2B$





The details presented above are owned by Suburban Consulting Engineers, Inc.