

JDF ASSUMPTIONS VS THOMPSON PIPE. MECHANICAL JOINTS ARE CORRECT AS THOMPSON USED, AND WE PREFER TYPE 5 SOIL BECAUSE NO SAFETY FACTOR IN PROGRAM

Project Name 70/71 6R

Location Columbus, OH

Designer RW

Company TPG

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Exit

Pipe Type

- ☐ ECP
- ☒ LCP
- ☐ BWP
- ☐ RCP

Pipe Properties

Inside Diameter 36 in.

Core Thickness 2.25 in.

Steel Cylinder OD 40.5 in.

Min. Steel Cyl. Thickness 0.0598 in.

Mortar Thickness 1 in.

Pipe Weight 404 lb/ft

Pressure

Working Pressure, Pw 150 psi

Transient Pressure, Pt 100 psi

Field Test Pressure, Pft 150 psi

TYPE 5=MOST CONSERVATIVE. RESULTS 2 TO 3 TIMES GREATER

445 PER THOMPSON PIPE, RESULTS 0 TO 6 FT SMALLER

Type 5=425


WELDED. LARGE DIFFERENCE, RESULTS 3 TO 8 TIMES GREATER

Material Properties

fy 36000 psi

fc 4500 psi

Soil Information

Soil Type 

Soil Stiffness, k 1900 psi

Unit Weight of Soil, γ_s 110 pcf

Coefficient of Friction, μ 0.3

Friction Angle, ϕ 30 deg

Joint Type

- ☐ Welded
- ☒ Mechanically Harnesssed

Joint Diameter 41 in.

Units

- ☒ US Customary
- ☐ Metric

☐ Submerged Soil

Type 5=20

BEND LENGTH=CENTERLINE LENGTH OF FITTING. 3 FOR ALL. RESULTS 0 to 3 FT SMALLER

Description	Bend Angle (deg)	Bend Length (ft)	Pipe Laying Length (ft)		Soil Cover (ft)
			First	Typical	
1 STA 0+20	11.25	0.8	20	20	6
2 STA 0+46	22.5	1.1	20	20	6
3 STA 1+12	45	1.75	20	20	6
4 STA 3+52	0	1	20	20	6
5 STA 3+70	11.25	3	20	20	6
6 STA 4+77	0	3	20	20	6