

# STANDARD DETAIL NO. 6.12

## LEE COUNTY UTILITIES

### RESTRAINED LENGTH SCHEDULE

N.T.S.

#### DUCTILE IRON PIPE

| PIPE<br>SIZE<br>(Inches) | MINIMUM RESTRAINED PIPE LENGTH (FEET) |     |         |         |                   |                   |
|--------------------------|---------------------------------------|-----|---------|---------|-------------------|-------------------|
|                          | HORIZONTAL BENDS                      |     |         |         | DEAD<br>END/VALVE | HORIZONTAL<br>TEE |
|                          | 90°                                   | 45° | 22-1/2° | 11-1/4° |                   |                   |
| 4                        | 17                                    | 7   | 4       | 2       | 29                | 6                 |
| 6                        | 23                                    | 10  | 5       | 2       | 40                | 17                |
| 8                        | 29                                    | 12  | 6       | 3       | 53                | 29                |
| 10                       | 35                                    | 14  | 7       | 4       | 63                | 38                |
| 12                       | 41                                    | 17  | 8       | 4       | 74                | 49                |
| 16                       | 51                                    | 21  | 11      | 5       | 94                | 68                |
| 24                       | 69                                    | 29  | 14      | 7       | 131               | 105               |
| 30                       | 81                                    | 34  | 17      | 8       | 156               | 129               |

#### PVC PIPE

| PIPE<br>SIZE<br>(Inches) | MINIMUM RESTRAINED PIPE LENGTH (FEET) |     |         |         |                   |                   |
|--------------------------|---------------------------------------|-----|---------|---------|-------------------|-------------------|
|                          | HORIZONTAL BENDS                      |     |         |         | DEAD<br>END/VALVE | HORIZONTAL<br>TEE |
|                          | 90°                                   | 45° | 22-1/2° | 11-1/4° |                   |                   |
| 4                        | 20                                    | 8   | 4       | 2       | 45                | 8                 |
| 6                        | 29                                    | 12  | 6       | 3       | 63                | 25                |
| 8                        | 36                                    | 15  | 8       | 4       | 83                | 43                |
| 10                       | 44                                    | 18  | 9       | 5       | 99                | 58                |
| 12                       | 51                                    | 21  | 11      | 5       | 116               | 74                |
| 16                       | 63                                    | 26  | 13      | 7       | 149               | 103               |
| 24                       | 87                                    | 36  | 18      | 9       | 208               | 158               |
| 30                       | 102                                   | 42  | 21      | 10      | 248               | 194               |

A COMPLETE JOINT RESTRAINING SCHEDULE FOR ALL ENCOUNTERED VERTICAL & HORIZONTAL BENDS, VERTICAL OFFSETS, TEES, AND DEAD ENDS SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

LENGTH FIGURES BASED ON FOLLOWING:

Pressure = 150 psi, FS = 1.5, trench type = 3, 30" cover  
on Bare pipe, Soil type = GP & SP