

DESIGN FACTORS FOR A DESIGN SPEED OF 40 MPH  
(URBAN) USING E= 4 % MAX.

| RADIUS<br>(FEET) | E<br>(%) | PAVEMENT WIDTH                                    |     |           |     |         |     |         |     |         |     |         |  |
|------------------|----------|---------------------------------------------------|-----|-----------|-----|---------|-----|---------|-----|---------|-----|---------|--|
|                  |          | 24 FT                                             |     | 36 FT     |     | 48 FT   |     | 60 FT   |     | 66 FT   |     | 72 FT   |  |
|                  |          | IGRDS EQUIVALENTS (NUMBER OF LANES AT LANE WIDTH) |     |           |     |         |     |         |     |         |     |         |  |
|                  |          | 1 @ 12'                                           |     | 1.5 @ 12' |     | 2 @ 12' |     | 3 @ 10' |     | 3 @ 11' |     | 3 @ 12' |  |
| Lt               | Lr       | Lt                                                | Lr  | Lt        | Lr  | Lt      | Lr  | Lt      | Lr  | Lt      | Lr  |         |  |
| 20000            | 2.1      | 120                                               | 120 | 120       | 120 | 120     | 120 | 120     | 120 | 120     | 120 | 120     |  |
| 15000            | 2.1      | 120                                               | 120 | 120       | 120 | 120     | 120 | 120     | 120 | 120     | 120 | 120     |  |
| 10000            | 2.1      | 120                                               | 120 | 120       | 120 | 120     | 120 | 120     | 120 | 120     | 120 | 120     |  |
| 7000             | 2.1      | 120                                               | 120 | 120       | 120 | 120     | 120 | 120     | 40  | 120     | 120 | 120     |  |
| 5000             | 2.1      | 120                                               | 120 | 120       | 120 | 120     | 120 | 120     | 120 | 120     | 120 | 120     |  |
| 4000             | 2.1      | 120                                               | 120 | 120       | 120 | 120     | 120 | 120     | 120 | 120     | 120 | 120     |  |
| 3000             | 2.2      | 115                                               | 120 | 115       | 120 | 115     | 120 | 115     | 120 | 115     | 120 | 115     |  |
| 2500             | 2.4      | 105                                               | 120 | 105       | 120 | 105     | 120 | 105     | 120 | 105     | 120 | 105     |  |
| 2250             | 2.5      | 101                                               | 120 | 101       | 120 | 101     | 120 | 101     | 120 | 101     | 120 | 101     |  |
| 2000             | 2.7      | 94                                                | 120 | 94        | 120 | 94      | 120 | 94      | 120 | 94      | 120 | 94      |  |
| 1750             | 2.8      | 90                                                | 120 | 90        | 120 | 90      | 120 | 90      | 120 | 90      | 120 | 90      |  |
| 1500             | 3.0      | 84                                                | 120 | 84        | 120 | 84      | 120 | 84      | 120 | 84      | 120 | 98      |  |
| 1300             | 3.2      | 79                                                | 120 | 79        | 120 | 79      | 120 | 79      | 120 | 92      | 140 | 92      |  |
| 1150             | 3.3      | 77                                                | 120 | 77        | 120 | 77      | 120 | 77      | 120 | 90      | 140 | 90      |  |
| 1000             | 3.5      | 72                                                | 120 | 72        | 120 | 72      | 120 | 84      | 140 | 84      | 140 | 96      |  |
| 900              | 3.7      | 69                                                | 120 | 69        | 120 | 69      | 120 | 80      | 140 | 91      | 160 | 91      |  |
| 800              | 3.8      | 67                                                | 120 | 67        | 120 | 67      | 120 | 78      | 140 | 89      | 160 | 89      |  |
| 750              | 3.9      | 65                                                | 120 | 65        | 120 | 76      | 140 | 76      | 140 | 87      | 160 | 97      |  |
| 700              | 3.9      | 65                                                | 120 | 65        | 120 | 76      | 140 | 76      | 140 | 87      | 160 | 97      |  |
| 650              | 4.0      | 63                                                | 120 | 63        | 120 | 74      | 140 | 74      | 140 | 84      | 160 | 95      |  |
| 600              | 4.0      | 63                                                | 120 | 63        | 120 | 74      | 140 | 74      | 140 | 84      | 160 | 95      |  |
| ⊕563             | 4.0      | 63                                                | 120 | 63        | 120 | 74      | 140 | 74      | 140 | 84      | 160 | 95      |  |

NOTE:

Lt AND Lr VALUES IN FEET.

FOR PAVEMENT WIDTHS GREATER THAN 72 FEET  
USE Lr VALUES DEVELOPED BY IGRDS WITH AN  
ABSOLUTE MINIMUM Lr OF 120 FEET.

⊕ MINIMUM ALLOWABLE RADIUS