STORM DRAINAGE Table 11-2

**TABLE 11-2** Sizing of Horizontal Rainwater Piping<sup>1, 2</sup>

| Size of<br>Pipe, | Flow at<br>10mm/m<br>Slope, | Maximum Allowable Horizontal Projected Roof Areas Square Metres at Various Rainfall Rates |                |                |               |              |              |
|------------------|-----------------------------|---|----------------|----------------|---------------|--------------|--------------|
| mm               | L/s                         | 25mm/h  | 50mm/h         | 75mm/h         | 100mm/h       | 125mm/h      | 150mm/h      |
| 75               | 2.1                         | 305   | 153            | 102            | 76            | 61           | 51           |
| 100              | 4.9                         | 700   | 350            | 233            | 175           | 140          | 116          |
| 125              | 8.8                         | 1,241   | 621            | 414            | 310           | 248          | 207          |
| 150              | 14.0                        | 1,988   | 994            | 663            | 497           | 398          | 331          |
| 200              | 30.2                        | 4,273   | 2,137          | 1,424          | 1,068         | 855          | 713          |
| 250              | 54.3                        | 7,692   | 3,846          | 2,564          | 1,923         | 1,540        | 1,282        |
| 300              | 87.3                        | 12,375  | 6,187          | 4,125          | 3,094         | 2,476        | 2,062        |
| 375              | 156.0                       | 22,110  | 11,055         | 7,370          | 5,528         | 4,422        | 3,683        |
| Size of          | Flow at                     | Max   |                |                | ntal Projecte |              | S            |
| Pipe,            | 20mm/m                      | Square Metres at Various Rainfall Rates   |                |                |               |              |              |
| mm               | Slope,<br>L/s               | 25mm/h  | 50mm/h         | 75mm/h         | 100mm/h       | 125mm/h      | 150mm/h      |
|                  |                             |   |                |                |               |              |              |
| 75               | 3.0                         | 431   | 216            | 144            | 108           | 86           | 72           |
| 100              | 6.9                         | 985   | 492            | 328            | 246           | 197          | 164          |
| 125              | 12.4                        | 1,754   | 877            | 585            | 438           | 351          | 292          |
| 150              | 19.8                        | 2,806   | 1,403          | 935            | 701           | 561          | 468          |
| 200              | 42.7                        | 6,057   | 3,029          | 2,019          | 1,514         | 1,211        | 1009         |
| 250              | 76.6                        | 10,851  | 5,425          | 3,618          | 2,713         | 2,169        | 1807         |
| 300              | 123.2                       | 17,465  | 8,733          | 5,816          | 4,366         | 3,493        | 2912         |
| 375              | 220.2                       | 31,214  | 15,607         | 10,405         | 7,804         | 6,248        | 5202         |
| Size of          | Flow at                     | Max   | imum Allow     | able Horizo    | ntal Projecte | d Roof Area  | s            |
| Pipe,            | 40mm/m<br>Slope,            | •   |                |                |               |              |              |
| mm               | L/s                         | 25mm/h  | 50mm/h         | 75mm/h         | 100mm/h       | 125mm/h      | 150mm/h      |
| 75               | 4.3                         | 611   | 305            | 204            | 153           | 122          | 102          |
| 100              | 9.8                         | 1,400   | 700            | 465            | 350           | 280          | 232          |
|                  |                             |   | 1,241          | 827            | 621           | 494          | 413          |
| 125              | 17.5                        | 2,482   | 1,441          | 027            | O=1           |              |              |
|                  |                             | 2,482<br>3,976  |                |                |               |              |              |
| 150<br>200       | 17.5<br>28.1<br>60.3        | 3,976   | 1,988          | 1,325          | 994           | 797          | 663          |
| 150              | 28.1                        | 3,976<br>8,547  | 1,988<br>4,273 | 1,325<br>2,847 | 994<br>2,137  | 797<br>1,709 | 663<br>1,423 |
| 150<br>200       | 28.1<br>60.3                | 3,976   | 1,988          | 1,325          | 994           | 797          | 663          |

<sup>&</sup>lt;sup>1</sup> The sizing data for horizontal piping are based on the pipes flowing full.

 $<sup>^{2}</sup>$  For rainfall rates other than those listed, determine the allowable roof area by dividing the area given in the 25mm/hour (1 in./hour) column by the desired rainfall rate. SI: 1mm = 0.04 in.; 1L/s = 15.85 gpm