

# Appendix G

# NOTES ON METRICATION

(Asterisk denotes exact number)

| Quantity                 | To Convert From . . .    | To . . .          | Multiply By . . . |
|--------------------------|--------------------------|-------------------|-------------------|
| Length                   | mile                     | km                | 1.609 344*        |
|                          | yard                     | m                 | 0.9144*           |
|                          | foot                     | m                 | 0.3048*           |
|                          | foot                     | mm                | 304.8*            |
|                          | inch                     | mm                | 25.4*             |
| Area                     | square mile              | km <sup>2</sup>   | 2.589 998         |
|                          | acre                     | m <sup>2</sup>    | 4046.873          |
|                          | acre                     | ha                | 0.404 687 3       |
|                          | square yard              | m <sup>2</sup>    | 0.836 127 4*      |
|                          | square foot              | m <sup>2</sup>    | 0.092 903 04*     |
|                          | square inch              | mm <sup>2</sup>   | 645.16*           |
| Volume                   | acre foot                | m <sup>3</sup>    | 1233.489          |
|                          | cubic yard               | m <sup>3</sup>    | 0.764 554 9       |
|                          | cubic foot               | m <sup>3</sup>    | 0.028 316 85      |
|                          | cubic foot               | cm <sup>3</sup>   | 28 316.85         |
|                          | cubic foot               | L                 | 28.316 85         |
|                          | 100 board feet           | m <sup>3</sup>    | 0.235 973 7       |
|                          | gallon                   | L                 | 3.785 412         |
|                          | cubic inch               | cm <sup>3</sup>   | 16.387 06         |
|                          | cubic inch               | mm <sup>3</sup>   | 16 387.06         |
| Mass                     | pound                    | kg                | 0.453 592 4       |
|                          | ton (2,000 pounds)       | kg                | 907.184 7         |
|                          | kip                      | t                 | 0.453 592 4       |
| Mass/unit length         | pound/foot               | kg/m              | 1.488 164         |
| Mass/unit area           | pound/foot <sup>2</sup>  | kg/m <sup>2</sup> | 4.882 428         |
| Mass density             | pound/foot <sup>3</sup>  | kg/m <sup>3</sup> | 16.018 46         |
| Force                    | pound                    | N                 | 4.448 222         |
|                          | kip                      | kN                | 4.448 222         |
| Force/unit length        | pound/foot               | N/m               | 14.593 90         |
|                          | kip/foot                 | kN/m              | 14.593 90         |
| Pressure, stress         | pound/foot <sup>2</sup>  | Pa                | 47.880 26         |
|                          | kip/foot <sup>2</sup>    | kPa               | 47.880 26         |
|                          | pound/inch <sup>2</sup>  | kPa               | 6.894 757         |
|                          | kip/inch <sup>2</sup>    | MPa               | 6.894 757         |
|                          | pound /inch <sup>2</sup> | N/mm <sup>2</sup> | 0.006 895         |
|                          | kip/inch <sup>2</sup>    | N/mm <sup>2</sup> | 6.894 757         |
| Bending Moment, torque   | foot-pound               | N•m               | 1.355 818         |
|                          | foot-kip                 | kN•m              | 1.355 818         |
| Moment of mass           | pound-foot               | kg•m              | 0.138 255 0       |
| Moment of inertia        | pound-foot <sup>2</sup>  | kg•m <sup>2</sup> | 0.042 140 11      |
| Second moment of inertia | inch <sup>4</sup>        | mm <sup>4</sup>   | 416 231.4         |
| Section modulus          | inch <sup>3</sup>        | mm <sup>3</sup>   | 16 387.06         |
| Temperature              | °F                       | °C                | (°F - 32)/5/9     |
| Plane angle              | degree                   | rad               | 0.017 453 29      |