

1003 REINFORCING STEEL

Certificates of Compliance are required for reinforcing steel. The Certificate of Compliance for reinforcing steel should be received before payment is made. If the project requires epoxy coated bars then the epoxy resin must be on the Department's [Approved Products List](#). The Inspector must ensure that any damaged to the epoxy coating is repaired in accordance with the Standard Specifications.

Refer to the *Materials Group Policy & Procedures Directives Manual* for information on the sampling, testing, certification, and marking of reinforcing bars. Additional information on reinforcing bars and their dimensions can be found in Chapter 5, Section 605-2.

The same general procedures are followed for wire mesh and smooth bars used as reinforcement except that there are no markings on the metal.

The "W" size designation of wire mesh refers to the area of the individual wire in hundredths of a square inch. W5 wire has an area of 0.050 square inches (32.3 square millimeters) as shown in the following table (Exhibit 1003-1).

The Standard Specification allows substitution of Grade 60 reinforcing bars for Grade 40 in certain cases. When the substitution is permitted, the authorization is to be in writing.

<u>NOMINAL SIZE NUMBER</u>	<u>NOMINAL DIAMETER (mm)</u>	<u>NOMINAL DIAMETER (in.)</u>	<u>AREA (square mm)</u>	<u>AREA (square in.)</u>
W 31	15.95	0.628	200.00	0.310
W 30	15.70	0.618	193.55	0.300
W 28	15.16	0.597	180.64	0.280
W 26	14.61	0.575	167.74	0.260
W 24	14.05	0.553	154.84	0.240
W 22	13.44	0.529	141.94	0.220
W 20	12.83	0.505	129.03	0.200
W 18	12.17	0.479	116.13	0.180
W 16	11.46	0.451	103.23	0.160
W 14	10.72	0.422	90.32	0.140
W 12	9.93	0.391	77.42	0.120
W 10	9.07	0.357	64.52	0.100
W 8	8.10	0.319	51.61	0.080
W 7	7.59	0.299	45.16	0.070
W 6	7.01	0.276	38.71	0.060
W 5.5	6.73	0.265	35.48	0.055
W 5	6.40	0.252	32.26	0.050
W 4.5	6.07	0.239	29.03	0.045
W 4	5.74	0.226	25.81	0.040
W 3.5	5.36	0.211	22.58	0.035
W 3	4.95	0.195	19.35	0.030
W 2.5	4.52	0.178	16.13	0.025
W 2	4.06	0.160	12.90	0.020
W 1.5	3.51	0.138	9.68	0.015
W 1.2	3.15	0.124	7.74	0.012
W 1	2.87	0.113	6.45	0.010
W 0.5	2.03	0.080	3.23	0.005