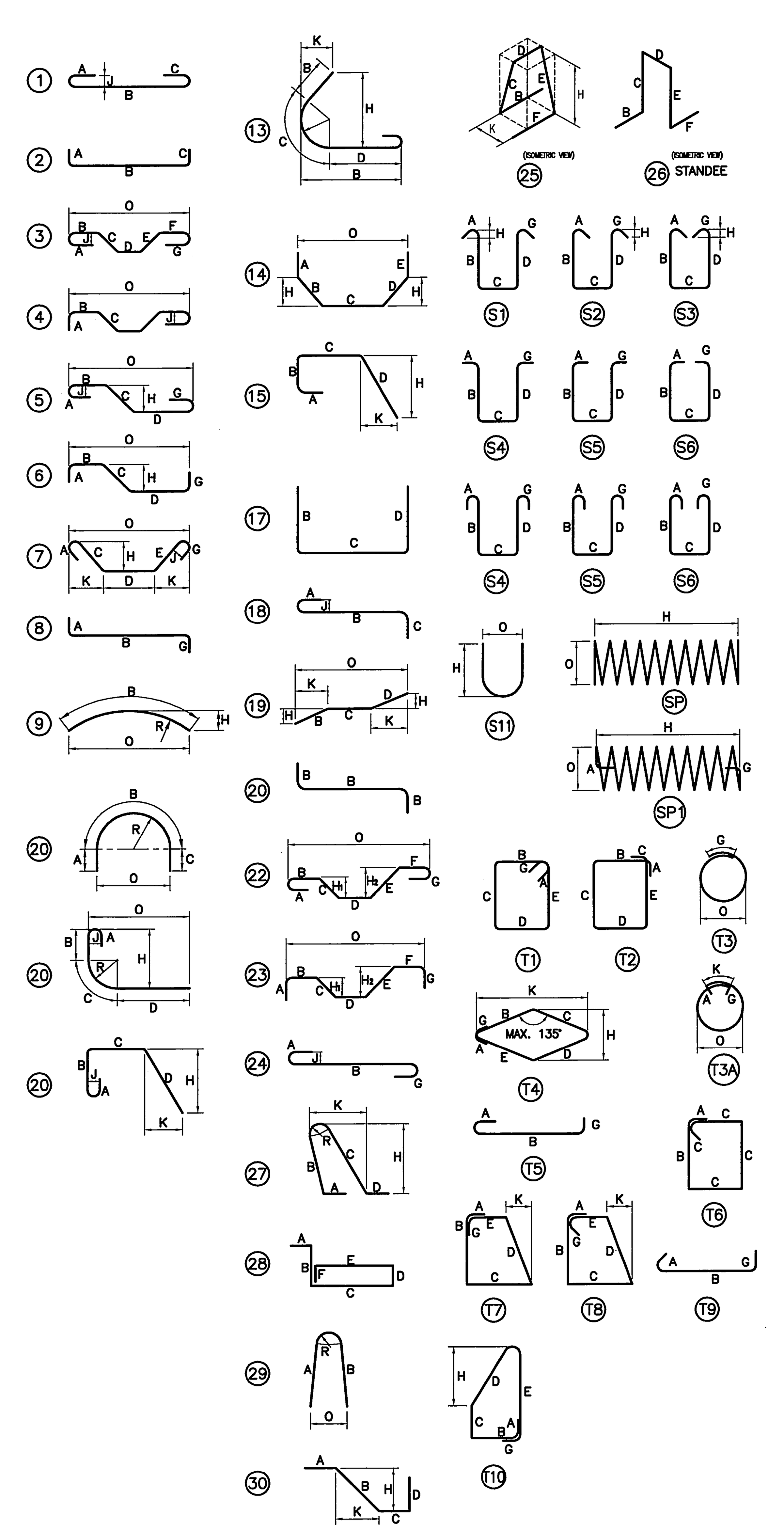
MARK	NO. BARS	SIZE	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	TOTAL (m)	MASS (kg)
W1501	4	15M	3000	400	2600	–											12.00	18.8
W1502	4	15M	2830	STR													11.32	17.8
W1503	3	15M	2760	STR													8.28	13.0
W1504	2	15M	2690	STR													5.38	8.5
W1505	2	15M	2620	STR													5.24	8.3
W1506	2	15M	2560	STR													5.12	8.0
W1507	2	15M	2480	STR													4.96	7.8
W1508	2	15M	2410	STR													4.82	7.6
W1509	2	15M	2340	STR													4.68	7.4
W1510	2	15M	2270	STR													4.54	7.1
W1511	2	15M	2200	STR													4.40	7.0
W1512	2	15M	2130	STR													4.26	6.7
W1513	2	15M	2060	STR													4.12	6.5
W1514	2	15M	1990	STR													3.98	6.3
W1515	2	15M	1920	STR													3.84	6.0
W1516	2	15M	1850	STR													3.70	5.8
W1517	2	15M	1780	STR													3.56	5.6
W1518	2	15M	1710	STR													3.42	5.4
W1519	2	15M	1640	STR													3.28	5.2
W1520	2	15M	1570	STR													3.14	4.9
W1521	2	15M	1500	STR													3.00	4.7
W1522	2	15M	1430	STR													2.86	4.5
W1523	2	15M	1360	STR													2.72	4.3
W1524	2	15M	1290	STR													2.58	4.1
W1525	2	15M	1220	STR													2.44	3.8
W1526	2	15M	1150	STR													2.30	3.6
W1527	2	15M	1080	STR													2.16	3.4
W1528	2	15M	1010	STR													2.02	3.2
W1529	3	15M	1075	STR													2.15	3.4
W1530	4	15M	2225	STR													8.90	14.0
W1531	4	15M	3000	2	400	2600	–										12.00	18.9
W1532	4	15M	2540	STR													10.16	16.0
W1533	3	15M	2505	STR													5.01	7.9
W1534	2	15M	2440	STR													4.88	7.7
W1535	2	15M	2380	STR													4.76	7.5
W1536	2	15M	2320	STR													4.64	7.3
W1537	2	15M	2255	STR													4.51	7.1
W1538	2	15M	2195	STR													4.39	6.9
W1539	2	15M	2135	STR													4.27	6.7
W1540	2	15M	2070	STR													4.14	6.5
W1541	2	15M	2010	STR													4.02	6.3
W1542	2	15M	1950	STR													3.90	6.1
W1543	2	15M	1885	STR													3.77	6.0
W1544	2	15M	1825	STR													3.65	5.7
W1545	2	15M	1765	STR													3.53	5.5
W1546	2	15M	1700	STR													3.40	5.3
W1547	2	15M	1640	STR													3.28	5.2
W1548	2	15M	1575	STR													3.15	4.9
W1549	2	15M	1515	STR													3.03	4.8
W1550	2	15M	1455	STR													2.91	4.6

MARK	NO. BARS	SIZE	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	TOTAL	MASS
W1551	2	15M	1395	STR													2.79	4.4
W1552	2	15M	1330	STR													2.66	4.2
W1553	2	15M	1270	STR													2.54	4.0
W1554	2	15M	1205	STR													2.41	3.8
W1555	2	15M	1145	STR													2.29	3.6
W1556	2	15M	1085	STR													2.17	3.4
W1557	2	15M	1020	STR													2.04	3.2
W1558	2	15M	975	STR													1.95	3.1
W1559	3	15M	1075	STR													2.15	3.4
W1560	4	15M	2225	STR													8.90	14.0
W2001	52	20M	2100	2	400	1700	–										109.20	257.2
W2002	2	20M	1670	2	500	1170	–										3.34	7.9
W2003	2	20M	2260	2	500	1760	–										4.52	10.7
W2004	2	20M	2850	2	500	2350	–										5.70	13.4
W2005	2	20M	3440	2	500	2940	–										6.88	16.2
W2006	2	20M	4023	2	500	3523	–										8.06	19.0
W2007	2	20M	4620	2	500	4120	–										9.24	21.8
W2008	2	20M	5210	2	500	4710	–										10.42	24.5
W2009	2	20M	5800	2	500	5300	–										11.60	27.3
W2010	2	20M	6240	2	500	5740	–										12.48	29.4
W2011	20	20M	6440	2	500	5940	–										12.88	30.3
W2012	2	20M	1420	19		405	1015	–				385		130			26.98	63.5
W2013	4	20M	6290	19		690	5600	–				220		655			119.51	281.4
W2014	2	20M	1530	2	500	1030	–										3.06	7.2
W2015	2	20M	2200	2	500	1700	–										4.40	10.4
W2016	2	20M	2870	2	500	2370	–										5.74	13.5
W2017	2	20M	3545	2	500	3045	–										7.09	16.7
W2018	2	20M	4215	2	500	3715	–										8.43	19.9
W2019	2	20M	4890	2	500	4390	–										9.78	23.0
W2020	2	20M	5560	2	500	5060	–										11.12	26.2
W2021	2	20M	6090	2	500	5590	–										12.18	28.7
W2022	2	20M	1300	19		405	910	–				385		115			2.63	6.2
S1501	86	15M	1000	–		–	–	–				–		–			86.00	135.0
																TOTAL MASS		1495.2

BENDING DIAGRAMS:

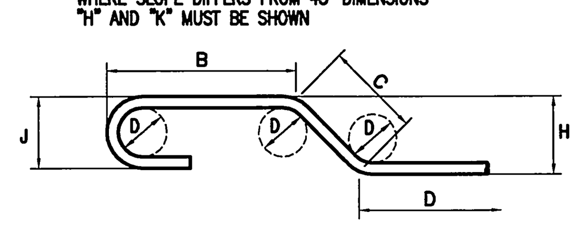


NOTES:

1. ALL DIMENSIONS ARE OUT–TO–OUT OF A BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS
2. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS TO BE USED.
3. ON TRUSS BARS "J" WILL BE KEPT EQUAL TO OR LESS THAN "H". WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
4. ON STIRRUPS "H" DIMENSION SHOULD BE SHOWN ONLY WHERE NECESSARY TO FIT WITHIN CONCRETE.
5. CRITICAL DIMENSIONS ARE TO BE WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCE.
6. ON TYPE T3 "G" IS EQUAL TO CLASS B SPLICE.
7. FIGURES SHOWN IN CIRCLES SHOW TYPES.
8. ALL BAR BENDS OTHER THAN THE TYPES SHOWN MUST BE DESIGNATED AS TYPE "X".

UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME ALL HOOKS AND BENDS ON A BAR.

WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN



ENLARGED VIEW BAR BENDING DETAILS

APEGM
Certificate of Authorization
Wardrop Engineering Inc.
No. 195 Date: April 30, 2008

NO.	REVISIONS	DATE	BY
00	ISSUED FOR TENDER	08.02.05	EFS

B.M. ELEV. — F.B.

WARDROP | Engineering Inc.

DESIGNED BY E.F.S. — CHECKED BY
DRAWN BY P.S./C.L. — APPROVED BY
HOR. SCALE: VERTICAL: AS NOTED — ACCEPTED BY [signature] DATE 08-02-05 — RANDY FINGAS, P. ENG BRIDGE PROJECTS ENGINEER
DATE 08.02.05

PROVINCE OF MANITOBA — 08/02/05 — E.F.G. SHEHATA — Member 23439 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 0600070700–DWG–S1142–00

Winnipeg — THE CITY OF WINNIPEG — PUBLIC WORKS DEPARTMENT — TRANSPORTATION ENGINEERING DIVISION

FORT GARRY TWIN BRIDGES
WESTBOUND STRUCTURE REHABILITATION AND ASSOCIATED ROADWORKS

REINFORCING SCHEDULE 3 (BLACK BARS)

CITY DRAWING NUMBER B173–08–042W
SHEET 42 OF 54