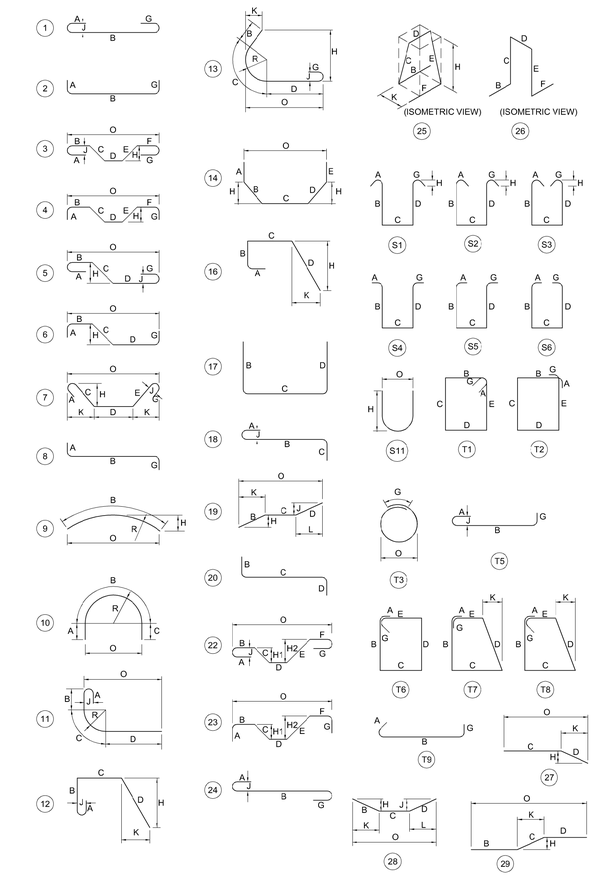
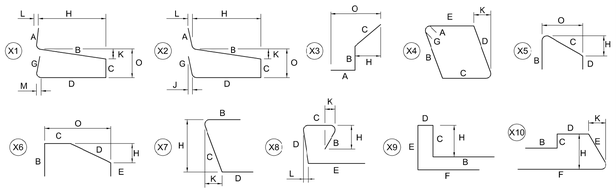
MARKS	NO BARS	SIZE	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	L	M	O	R	SHAPE	MASS (kg)
NORTH RETAINING WALL																				
RW1601X	102	16	2 520	4		500	580	360	580	500		360					2260			398.93
RW1602X	198	16	2 020	4			580	360	580	500		360					1760			620.74
RW1603X	143	16	4 100	STR																909.94
RW1604X(1)	125	16	970	STR																188.18
RW1604X(2)	185	16	1 570	STR																450.78
RW1604X(3)	105	16	1 370	STR																223.26
RW1604X(4)	60	16	1 170	STR																108.95
RW1605X	4	16	6 100	STR																37.87
RW1606X	8	16	2 975	X8		500	640	635	1200			450		290	0					36.94
RW1607X	6	16	2 975	X8		500	640	635	1200			450		290	45					27.70
RW1608X	4	16	2 975	X8		500	640	635	1200			450		290	0					18.47
C1601X	444	16	1140	17		230	680	230												785.56
C1602X	520	16	1690	X9		450	290	180	320	450		305								1 363.90
C1603X(1)	144	16	4100	STR																916.30
C1603X(3)	8	16	4380	STR																54.38
C1603X(4)	40	16	3115	STR																193.38
C1604X	24	16	1150	17		800	200	150												42.84
C2501X	12	25	600	STR																28.61
																			TOTAL MASS: NORTH RETAINING WALL (kg)	6 406.70
SOUTH RETAINING WALL																				
RW1601X	70	16	2 520	4		500	580	360	580	500		360					2260			273.77
RW1602X	134	16	2 020	4			580	360	580	500		360					1760			420.10
RW1603X	96	16	4 100	STR																610.87
RW1604X(5)	227	16	1 640	STR																577.78
RW1604X(6)	2	16	1 560	STR																4.84
RW1604X(7)	2	16	1 490	STR																4.62
RW1604X(8)	2	16	1 415	STR																4.39
RW1604X(9)	2	16	1 350	STR																4.19
RW1604X(10)	2	16	1 270	STR																3.94
RW1604X(11)	2	16	1 210	STR																3.76
RW1604X(12)	2	16	1 130	STR																3.51
RW1604X(13)	2	16	1 060	STR																3.29
RW1604X(14)	2	16	995	STR																3.09
RW1604X(15)	2	16	920	STR																2.86
RW1604X(16)	2	16	845	STR																2.62
RW1604X(17)	2	16	770	STR																2.39
RW1604X(18)	2	16	695	STR																2.16
RW1604X(19)	2	16	620	STR																1.92
RW1604X(20)	2	16	580	STR																1.80
RW1604X(21)	2	16	500	STR																1.55
RW1604X(22)	2	16	425	STR																1.32
RW1604X(23)	28	16	315	STR																13.69
RW1609X	2	16	3 220	STR																9.99
RW1610X	2	16	2 030	STR																6.30
RW1611X	2	16	830	STR																2.58
RW1612X	4	16	3 700	STR																22.97
RW1613X	4	16	2 135	17			300	635	1200											13.25
RW1614X	4	16	1 590	3	180	350	560	500				430	130							9.87
C1603X(1)	119	16	4100	STR																757.22
C1603X(4)	14	16	3115	STR																67.68
C1605X	247	16	1570	X5		530	890	150				375					830			601.85
C1606X	2	16	1575	X6			650	775	150			350					1350			4.89
C1607X(1)	2	16	1970	17		850	270	850												6.11
C1607X(2)	2	16	2680	17		1070	540	1070												8.32
C1607X(3)	4	16	3410	17		1310	790	1310												21.17
C1608X	2	16	1350	X6		330	475	395	150			175					830			4.19
C2501X	2	25	600	STR																4.77
																			TOTAL MASS: SOUTH RETAINING WALL (kg)	3 489.63

MARKS	NO BARS	SIZE	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	L	M	O	R	SHAPE	MASS (kg)
ROADWAY SHOULDER BARRIER																				
F1601X(1)	2400	16	2 850	STR																10 615.68
F1601X(2)	30	16	3 070	STR																142.94
F1601X(3)	30	16	4 050	STR																188.57
F1601X(4)	2	16	1 240	STR																3.85
F1601X(5)	2	16	1 360	STR																4.22
F1601X(6)	2	16	1 480	STR																4.59
F1601X(7)	2	16	1 600	STR																4.97
F1601X(8)	2	16	1 720	STR																5.34
F1601X(9)	2	16	1 850	STR																5.74
F1601X(10)	2	16	1 970	STR																6.11
F1601X(11)	2	16	2 090	STR																6.49
F1601X(12)	2	16	2 210	STR																6.86
F1601X(13)	2	16	2 330	STR																7.23
F1601X(14)	2	16	2 460	STR																7.64
F1601X(15)	36	16	1 660	STR																92.75
F1601X(16)	2	16	2 360	STR																7.33
F1601X(17)	2	16	2 490	STR																7.73
F1601X(18)	2	16	2 620	STR																8.13
F1601X(19)	2	16	2 750	STR																8.54
F1601X(20)	2	16	2 870	STR																8.91
F1601X(21)	2	16	3 000	STR																9.31
F1601X(22)	2	16	3 130	STR																9.72
F1601X(23)	2	16	3 260	STR																10.12
F1601X(24)	2	16	3 390	STR																10.52
F1601X(25)	2	16	3 510	STR																10.90
F1601X(26)	2	16	3 640	STR																11.30
F1601X(27)	36	16	2 260	STR																126.27
F1601X(28)	24	16	2 515	STR																93.68
F1601X(29)	24	16	2 330	STR																86.79
F1601X(30)	24	16	2 130	STR																79.34
F1601X(31)	20	16	1 940	STR																60.22
F1601X(32)	72	16	1 830	STR																204.49
F1601X(33)	80	16	1 800	STR																223.49
F1601X(34)	21	16	4 830	STR																157.42
F1601X(35)	4	16	1 010	STR																6.27
F1601X(36)	8	16	770	STR																9.56
F1601X(37)	8	16	660	STR																8.19
F1601X(38)	8	16	610	STR																7.57
F1601X(39)	2	16	1 190	STR																3.69
F1601X(40)	4	16	720	STR																4.47
F1601X(41)	4	16	490	STR																3.04
F1601X(42)	4	16	390	STR																2.42
F1602X(1)	1312	16	3 000	17		250	2500	250												6 108.67
F1602X(2)	1	16	2 680	17		250	2180	250												4.16
F1602X(3)	1	16	2 350	17		250	1850	250												3.65
F1602X(4)	1	16	2 030	17		250	1530	250												3.15
F1602X(5)	1	16	1 700	17		250	1200	250												2.64
F1602X(6)	1	16	1 370	17		250	870	250												2.13
F1602X(7)	1	16	1 050	17		250	550	250												1.63
F1602X(8)	1	16	2 900	17		250	2400	250												4.50
F1602X(9)	1	16	2 590	17		250	2090	250												4.02
F1602X(10)	1	16	2 270	17		250	1770	250												3.52
F1602X(11)	1	16	1 960	17		250	1460	250												3.04
F1602X(12)	1	16	1 650	17		250	1150	250												2.56
F1602X(13)	1	16	1 330	17		250	830	250												2.06
F1602X(14)	1	16	1 020	17		250	520	250												1.58
F1602X(15)	1	16	2 730	17		250	2230	250												4.24
F1602X(16)	1	16	2 420	17		250	1920	250												3.76
																			ROADWAY SHOULDER BARRIER CONTINUED ON NEXT SHEET, CHROMX MASS THIS SHEET: (kg)	18 437.70
																			TOTAL MASS OF CHROMX = 28 334.03 kg	



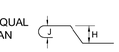
A.C.I. - TYPICAL BAR BENDS



SPECIAL BAR BENDS

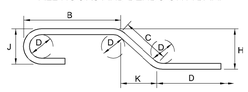
NOTES:

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 ARE 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. THE STIRRUPS "H" DIMENSION SHOULD BE SHOWN ONLY WHERE NECESSARY TO FIT WITHIN CONCRETE.
5. CRITICAL DIMENSIONS ARE TO BE IDENTIFIED WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES.
6. ON TYPE T3 "G" DIMENSION IS EQUAL TO CLASS C SPLICE.
7. FIGURES SHOWN IN CIRCLES SHOW TYPES.
8. ALL BAR BENDS OTHER THAN THE TYPES SHOWN ABOVE MUST BE DESIGNATED TYPE "X".

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



ENLARGED VIEW SHOWING BAR BENDING DETAILS

APEGM
Certificate of Authorization
Dillon Consulting Limited (MB)
No. 1789 Date: 2018/02/09

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	18/02/09	DRA

DILLON CONSULTING

DESIGNED BY	DRA	CHECKED BY	SSR
DRAWN BY	MG	APPROVED BY	MBL
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERTICAL	AS SHOWN		
DATE	2018/02/09	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
D.R.C. AMORIM
Member
33215
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER
17-5932

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

FERMOR AVENUE BRIDGE OVER SEINE RIVER
BRIDGE REHABILITATION, PEDESTRIAN-CYCLIST UNDERPASS STRUCTURE AND ROADWORKS FROM ST. ANNE'S ROAD TO ARCHIBALD STREET

PEDESTRIAN-CYCLIST UNDERPASS
REINFORCING STEEL SCHEDULE 1 OF 6

CITY DRAWING NUMBER
U-243-2017-CS-083
SHEET 083 OF 100
CONSULTANT DRAWING NUMBER
CS- 083

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