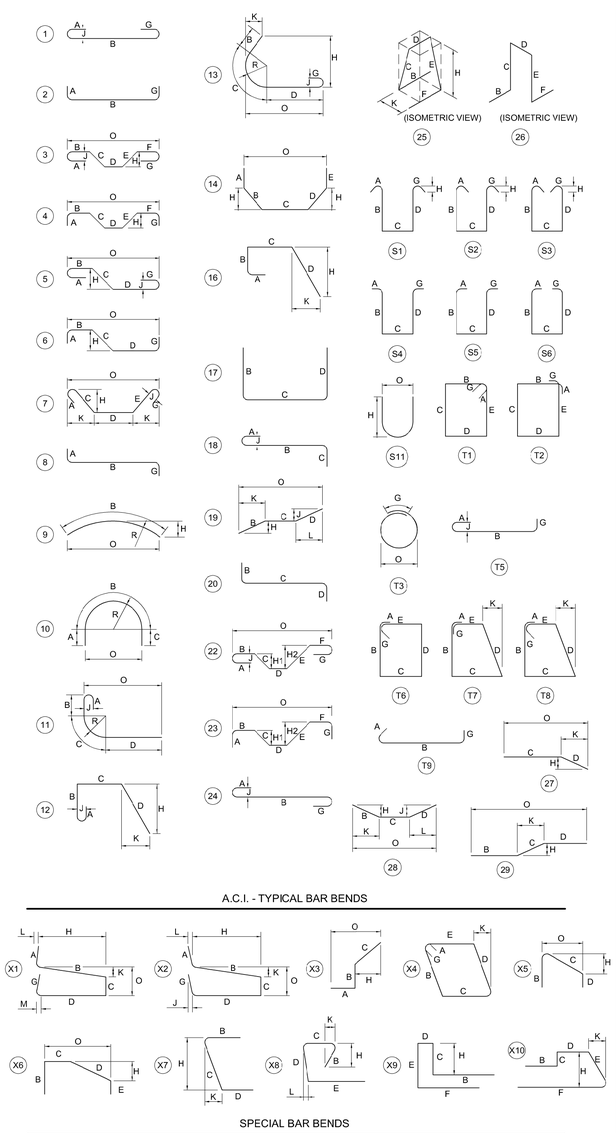
MARKS	NO BARS	SIZE	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	L	M	O	R	SHAPE	MASS (kg)
FERMOR UNDERPASS STRUCTURE (CONT)																				
U2501X(8)	2	25	7 235	17		450	6335	450												57.49
U2501X(9)	2	25	6 990	17		450	6090	450												55.54
U2501X(10)	2	25	6 755	17		450	5855	450												53.68
U2501X(11)	2	25	6 520	17		450	5620	450												51.81
U2501X(12)	2	25	6 280	17		450	5380	450												49.90
U2501X(13)	2	25	6 040	17		450	5140	450												47.99
U2501X(14)	2	25	5 800	17		450	4900	450												46.09
U2501X(15)	2	25	5 560	17		450	4660	450												44.18
U2501X(16)	2	25	5 320	17		450	4420	450												42.27
U2501X(17)	2	25	5 080	17		450	4180	450												40.37
U2501X(18)	2	25	4 840	17		450	3940	450												38.46
U2501X(19)	2	25	4 600	17		450	3700	450												36.55
U2501X(20)	2	25	4 360	17		450	3460	450												34.64
U2501X(21)	2	25	4 120	17		450	3220	450												32.74
U2501X(22)	2	25	3 885	17		450	2985	450												30.87
U2501X(23)	2	25	3 645	17		450	2745	450												28.96
U2501X(24)	2	25	3 405	17		450	2505	450												27.06
U2501X(23)	2	25	3 165	17		450	2265	450												25.15
U2501X(26)	2	25	2 925	17		450	2025	450												23.24
U2501X(27)	2	25	2 690	17		450	1790	450												21.37
U2501X(28)	2	25	2 450	17		450	1550	450												19.47
U2501X(29)	2	25	2 210	17		450	1310	450												17.56
U2501X(30)	2	25	1 970	17		450	1070	450												15.65
U2501X(31)	2	25	1 730	17		450	830	450												13.75
U2501X(32)	2	25	1 495	17		450	595	450												11.88
U2501X(33)	2	25	1 260	17		450	360	450												10.01
U2502X(1)	227	25	8 850	X7		450	7950	450						147						7 981.56
U2502X(2)	2	25	8 675	X7		450	7775	450						144						68.93
U2502X(3)	2	25	8 435	X7		450	7535	450						140						67.02
U2502X(4)	2	25	8 190	X7		450	7290	450						136						65.08
U2502X(5)	2	25	7 950	X7		450	7050	450						132						63.17
U2502X(6)	2	25	7 710	X7		450	6810	450						127						61.26
U2502X(7)	2	25	7 470	X7		450	6570	450						123						59.36
U2502X(8)	2	25	7 235	X7		450	6335	450						118						57.49
U2502X(9)	2	25	6 990	X7		450	6090	450						114						55.54
U2502X(10)	2	25	6 755	X7		450	5855	450						109						53.68
U2502X(11)	2	25	6 520	X7		450	5620	450						105						51.81
U2502X(12)	2	25	6 280	X7		450	5380	450						101						49.90
U2502X(13)	2	25	6 040	X7		450	5140	450						96						47.99
U2502X(14)	2	25	5 800	X7		450	4900	450						92						46.09
U2502X(13)	2	25	5 560	X7		450	4660	450						87						44.18
U2502X(16)	2	25	5 320	X7		450	4420	450						83						42.27
U2502X(17)	2	25	5 080	X7		450	4180	450						78						40.37
U2502X(18)	2	25	4 840	X7		450	3940	450						74						38.46
U2502X(19)	2	25	4 600	X7		450	3700	450						70						36.55
U2502X(20)	2	25	4 360	X7		450	3460	450						65						34.64
U2502X(21)	2	25	4 120	X7		450	3220	450						61						32.74
U2502X(22)	2	25	3 885	X7		450	2985	450						56						30.87
U2502X(23)	2	25	3 645	X7		450	2745	450						52						28.96
U2502X(24)	2	25	3 405	X7		450	2505	450						47						27.06
U2502X(25)	2	25	3 165	X7		450	2265	450						43						25.15
U2502X(26)	2	25	2 925	X7		450	2025	450						39						23.24
U2502X(27)	2	25	2 690	X7		450	1790	450						34						21.37
U2502X(28)	2	25	2 450	X7		450	1550	450						30						19.47
U2502X(29)	2	25	2 210	X7		450	1310	450						25						17.56
U2502X(30)	2	25	1 970	X7		450	1070	450						21						15.65
U2502X(31)	2	25	1 730	X7		450	830	450						17						13.75
U2502X(32)	2	25	1 495	X7		450	595	450						12						11.88
U2502X(33)	2	25	1 260	X7		450	360	450						8						10.01

MARKS	NO BARS	SIZE	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	L	M	O	R	SHAPE	MASS (kg)
U2502X(34)	2	25	1 025	X7		450	125	450						3						8.14
U2503	20	25	7 960	STR																632.50
U2504X(1)	234	25	6 450	STR																5 996.45
U2504X(2)	2	25	5 740	STR																45.61
U2504X(3)	2	25	5 500	STR																43.70
U2504X(4)	2	25	5 250	STR																41.72
U2504X(5)	2	25	5 010	STR																39.81
U2504X(6)	2	25	4 770	STR																37.90
U2504X(7)	2	25	4 530	STR																36.00
U2504X(8)	2	25	4 280	STR																34.01
U2504X(9)	2	25	4 040	STR																32.10
U2504X(10)	2	25	4 800	STR																38.14
U2504X(11)	2	25	3 560	STR																28.29
U2504X(12)	2	25	3 320	STR																26.38
U2504X(13)	2	25	3 070	STR																24.39
U2505X	520	25	4 035	17			3035	1000												8 336.15
U2506X	522	25	4 490	17			4090	400												9 311.84
U2507X(1)	492	25	3 930	17			1700	2230												7 682.03
U2507X(2)	2	25	5 160	17			2930	2230												41.00
U2507X(3)	2	25	4 930	17			2700	2230												39.17
U2507X(4)	2	25	4 690	17			2460	2230												37.27
U2507X(5)	2	25	4 450	17			2220	2230												35.36
U2507X(6)	2	25	4 210	17			1980	2230												33.45
U2507X(7)	2	25	3 970	17			1740	2230												31.55
U2507X(8)	2	25	3 730	17			1500	2230												29.64
U2507X(9)	2	25	3 500	17			1270	2230												27.81
U2507X(10)	2	25	3 260	17			1030	2230												25.90
U2507X(11)	4	25	3 030	17			800	2230												48.15
U2507X(12)	2	25	2 790	17			560	2230												22.17
U2507X(13)	2	25	2 550	17			320	2230												20.26
U2901X(1)	231	29	7 540	1	400	6740	400						310							8 813.20
U2901X(2)	2	29	7 155	1	400	6355	400						310							72.41
U2901X(3)	2	29	6 920	1	400	6120	400						310							70.03
U2901X(4)	2	29	6 680	1	400	5880	400						310							67.60
U2901X(5)	2	29	6 435	1	400	5635	400						310							65.12
U2901X(6)	2	29	6 190	1	400	5390	400						310							62.64
U2901X(7)	2	29	5 950	1	400	5150	400						310							60.21
U2901X(8)	2	29	5 710	1	400	4910	400						310							57.79
U2901X(9)	2	29	5 465	1	400	4665	400						310							55.31
U2901X(10)	2	29	5 225	1	400	4425	400						310							52.88
U2901X(11)	2	29	4 980	1	400	4180	400						310							50.40
U2901X(12)	2	29	4 740	1	400	3940	400						310							47.97
U2901X(13)	2	29	4 500	1	400	3700	400						310							45.54
U2901X(14)	2	29	4 255	1	400	3455	400						310							43.06
U2901X(13)	2	29	4 015	1	400	3215	400						310							40.63
U2901X(16)	2	29	3 770	1	400	2970	400						310							38.15
U2901X(17)	2	29	3 530	1	400	2730	400						310							35.72
U2901X(18)	2	29	3 285	1	400	2485	400						310							33.24
U2901X(19)	2	29	3 045	1	400	2245	400						310							30.82
U2901X(20)	2	29	2 800	1	400	2000	400						310							28.34
U2901X(21)	2	29	2 560	1	400	1760	400						310							25.91
U2901X(22)	2	29	2 320	1	400	1520	400						310							23.48
U2901X(23)	2	29	2 075	1	400	1275	400						310							21.00
U2901X(24)	2	29	1 835	1	400	1035	400						310							18.57
U2901X(25)	2	29	1 590	1	400	790	400						310							16.09
U2901X(26)	2	29	1 350	1	400	550	400						310							13.66
U2901X(27)	2	29	1 200	1	400	400	400						310							12.14
																			TOTAL MASS: FERMOR UNDERPASS STRUCTURE: (kg)	76 951.20
																			TOTAL MASS OF CHROMX =	52 816.71 kg

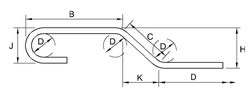


NOTES:

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	DB	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 4 OF 6

CITY DRAWING NUMBER: U-243-2017-CS-086
SHEET 086 OF 100
CONSULTANT DRAWING NUMBER: CS- 086

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