ISO A1 - 594mm x 841mm

BILL OF REINFORCING STEEL (STAINLESS STEEL)

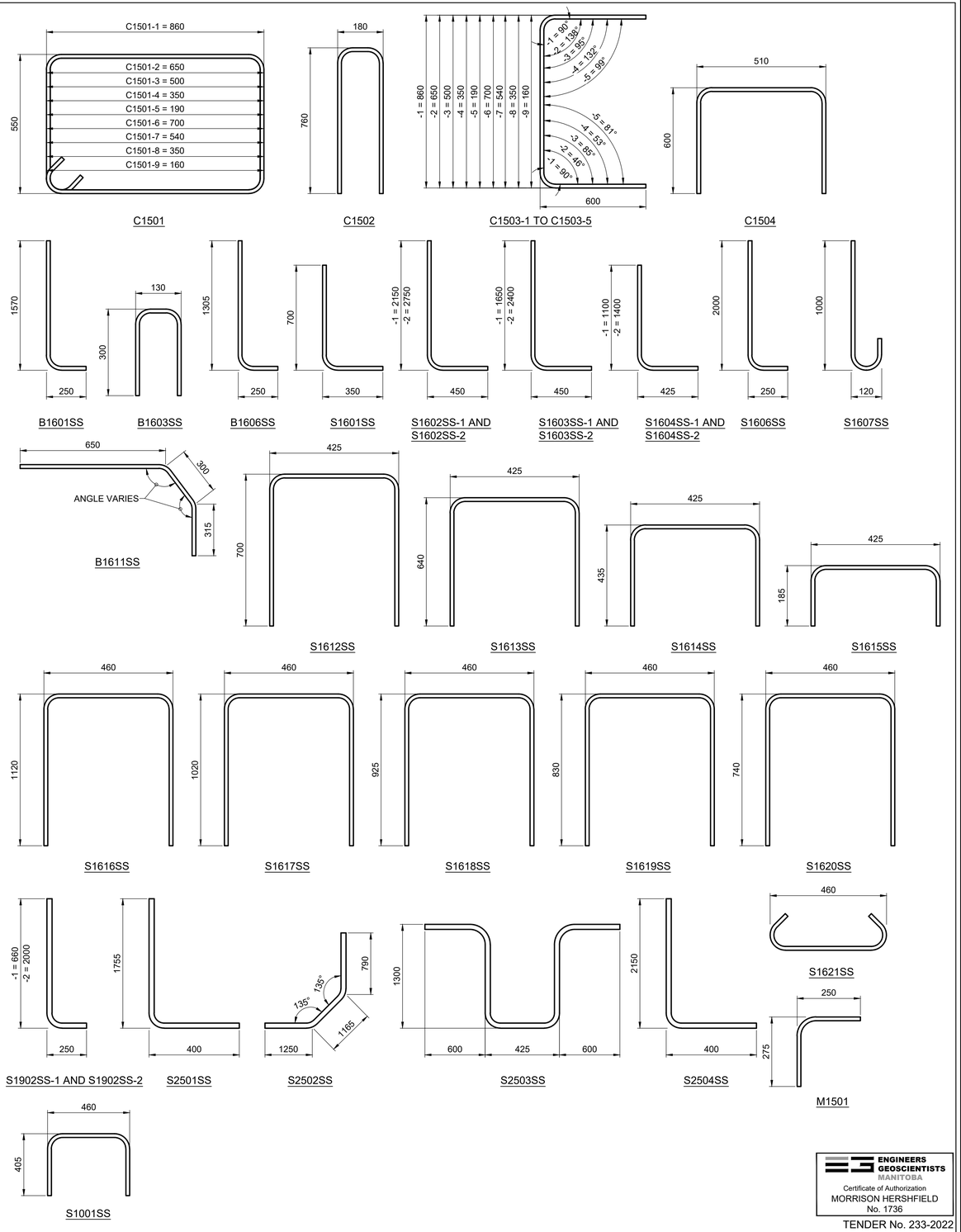
BARRIER (B), SIDEWALK (S)

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS
B1601SS	BENT	90	1820	300	847.39
B1602SS	STR	-	1350	300	628.56
B1603SS	BENT	90	730	104	117.83
B1604SS	STR	-	600	26	24.21
B1605SS-1	STR	-	4790	10	74.34
B1605SS-2	STR	-	4865	10	75.50
B1605SS-3	STR	-	3990	20	123.85
B1605SS-4	STR	-	3460	10	53.70
B1605SS-5	STR	-	3520	10	54.63
B1605SS-6	STR	-	3200	20	99.33
B1605SS-7	STR	-	4400	20	136.58
B1605SS-8	STR	-	4165	20	129.28
B1606SS	BENT	90	1555	122	294.43
B1607SS	STR	-	1305	125	253.17
B1608SS-1	STR	-	4350	2	13.50
B1608SS-2	STR	-	1050	2	3.26
B1608SS-3	STR	-	1980	2	6.15
B1608SS-4	STR	-	2905	2	9.02
B1608SS-5	STR	-	3835	2	11.90
B1609SS-1	STR	-	3900	2	12.11
B1609SS-2	STR	-	885	2	2.75
B1609SS-3	STR	-	1715	2	5.32
B1609SS-4	STR	-	2540	2	7.88
B1609SS-5	STR	-	3370	2	10.46
S1001SS	BENT	60	1270	3	2.99
S1601SS	BENT	90	1050	122	198.81
S1602SS-1	BENT	90	2650	122	501.76
S1602SS-2	BENT	90	3200	10	49.66
S1603SS-1	BENT	90	2100	122	397.62
S1603SS-2	BENT	90	2850	10	44.23
S1604SS-1	BENT	90	1525	61	144.37
S1604SS-2	BENT	90	1825	18	50.98
S1605SS	STR	-	2000	122	378.69
S1606SS	BENT	90	2250	122	426.02
S1607SS	BENT	90	1170	68	123.48
S1608SS-1	STR	-	8620	2	26.76
S1608SS-2	STR	-	8630	2	26.79
S1608SS-3	STR	-	8640	2	26.82
S1608SS-4	STR	-	8650	2	26.85
S1608SS-5	STR	-	8660	2	26.88
S1608SS-6	STR	-	8670	2	26.91
S1608SS-7	STR	-	8680	2	26.94
S1608SS-8	STR	-	8690	2	26.97
S1608SS-9	STR	-	8700	2	27.00
S1608SS-10	STR	-	8715	2	27.05
S1608SS-11	STR	-	8725	2	27.08
S1608SS-12	STR	-	8735	2	27.11
S1608SS-13	STR	-	8750	2	27.16
S1608SS-14	STR	-	8760	2	27.19
S1608SS-15	STR	-	8770	2	27.22
S1608SS-16	STR	-	8780	2	27.25
S1608SS-17	STR	-	8790	2	27.28
S1608SS-18	STR	-	8800	8	109.26
S1608SS-19	STR	-	8810	4	54.69
S1609SS-1	STR	-	8250	2	25.61
S1609SS-2	STR	-	8260	2	25.64
S1609SS-3	STR	-	8270	2	25.67
S1609SS-4	STR	-	8280	2	25.70
S1609SS-5	STR	-	8290	2	25.73
S1609SS-6	STR	-	8300	2	25.76
S1609SS-7	STR	-	8310	2	25.79
S1609SS-8	STR	-	8320	2	25.83
S1609SS-9	STR	-	8335	2	25.87
S1609SS-10	STR	-	8345	2	25.90
S1609SS-11	STR	-	8360	2	25.95
S1609SS-12	STR	-	8375	2	26.00
S1609SS-13	STR	-	8390	2	26.04
S1609SS-14	STR	-	8405	2	26.09
S1609SS-15	STR	-	8420	2	26.14
S1609SS-16	STR	-	8435	2	26.18
S1609SS-17	STR	-	8455	2	26.24
S1609SS-18	STR	-	8475	4	52.61
S1609SS-19	STR	-	8495	2	26.37
S1609SS-20	STR	-	2500	2	7.76
S1609SS-21	STR	-	2070	2	6.43
S1609SS-22	STR	-	1640	2	5.09
S1609SS-23	STR	-	1210	2	3.76
S1609SS-24	STR	-	780	2	2.42
S1609SS-25	STR	-	350	2	1.09
S1610SS	STR	-	1000	61	94.67
S16011SS	BENT	90	1265	61	119.76
S16012SS	BENT	90	1825	4	11.33
S16013SS	BENT	90	1705	1	2.65
S16014SS	BENT	90	1295	1	2.01
S16015SS	BENT	90	795	1	1.23
S16016SS	BENT	65	2700	2	8.38
S16017SS	BENT	65	2500	2	7.76
S16018SS	BENT	65	2310	2	7.17
S16019SS	BENT	65	2120	2	6.58
S16020SS	BENT	65	1940	2	6.02
S16021SS	BENT	65	740	2	2.30
S1901SS	STR	-	2370	250	1383.49
S1902SS-1	BENT	100	810	170	321.53
S1902SS-2	BENT	100	2250	80	420.30
S1903SS-1	STR	-	14110	1	32.95
S1903SS-2	STR	-	13895	1	32.44
S1903SS-3	STR	-	13680	1	31.94
S1903SS-4	STR	-	13470	1	31.45
S1903SS-5	STR	-	13250	1	30.94
S1903SS-6	STR	-	13040	1	30.45
S1903SS-7	STR	-	12825	1	29.95
S1903SS-8	STR	-	12600	1	29.42
S1903SS-9	STR	-	12325	1	28.78
S1903SS-10	STR	-	12100	1	28.25
S1903SS-11	STR	-	11850	1	27.67
S1903SS-12	STR	-	11620	1	27.13
S1903SS-13	STR	-	11380	1	26.57
S1903SS-14	STR	-	11140	1	26.01
S1903SS-15	STR	-	10950	1	25.57
S1903SS-16	STR	-	10740	1	25.08
S1903SS-17	STR	-	10525	1	24.58
S1903SS-18	STR	-	10350	1	24.17
S1904SS-1	STR	-	8160	1	19.05
S1904SS-2	STR	-	8200	1	19.15
S1904SS-3	STR	-	8220	1	19.19
S1904SS-4	STR	-	8240	1	19.24
S1904SS-5	STR	-	8260	1	19.29
S1904SS-6	STR	-	8280	1	19.33
S1904SS-7	STR	-	8300	1	19.38
S1904SS-8	STR	-	8325	1	19.44
S1904SS-9	STR	-	8345	1	19.49
S1904SS-10	STR	-	8365	1	19.53
S1904SS-11	STR	-	8385	1	19.58
S1904SS-12	STR	-	8400	1	19.61
S1904SS-13	STR	-	8405	1	19.63
S1904SS-14	STR	-	8425	1	19.67
S1904SS-15	STR	-	8435	1	19.70
S1904SS-16	STR	-	8450	1	19.73
S1904SS-17	STR	-	8460	1	19.75
S1904SS-18	STR	-	8465	1	19.77
S1905SS-1	STR	-	8325	1	19.44
S1905SS-2	STR	-	8145	1	19.02
S1905SS-3	STR	-	7965	1	18.60
S1905SS-4	STR	-	7785	1	18.18
S1905SS-5	STR	-	7605	1	17.76
S1905SS-6	STR	-	7425	1	17.34
S1905SS-7	STR	-	7240	1	16.91
S1905SS-8	STR	-	7060	1	16.49
S1905SS-9	STR	-	6875	1	16.05
S1905SS-10	STR	-	6695	1	15.63
S1905SS-11	STR	-	6510	1	15.20
S1905SS-12	STR	-	6325	1	14.77
S1905SS-13	STR	-	6140	1	14.34
S1905SS-14	STR	-	5955	1	13.90
S1905SS-15	STR	-	5770	1	13.47
S1905SS-16	STR	-	5580	1	13.03
S1905SS-17	STR	-	5395	1	12.60
S1906SS-1	STR	-	7660	1	17.89
S1906SS-2	STR	-	7640	1	17.84
S1906SS-3	STR	-	7620	1	17.79
S1906SS-4	STR	-	7600	1	17.75
S1906SS-5	STR	-	7580	1	17.70
S1906SS-6	STR	-	7560	1	17.65
S1906SS-7	STR	-	7535	1	17.59
S1906SS-8	STR	-	7520	1	17.56
S1906SS-9	STR	-	7500	1	17.51
S1906SS-10	STR	-	7480	1	17.47
S1906SS-11	STR	-	7465	1	17.43
S1906SS-12	STR	-	7445	1	17.38
S1906SS-13	STR	-	7400	1	17.28
S1906SS-14	STR	-	7400	1	17.28
S1906SS-15	STR	-	7400	1	17.28
S1906SS-16	STR	-	7400	1	17.28
S1906SS-17	STR	-	7400	1	17.28
S2501SS	BENT	150	2155	4	33.83
S2502SS	BENT	150	3230	1	12.68
S2503SS	BENT	150	4225	2	33.17
S2504SS	BENT	150	2550	4	40.04
TOTAL MASS OF REINFORCING STEEL (STAINLESS) (kg):					10432.13

BILL OF REINFORCING STEEL (BLACK STEEL)

MEDIAN (M), PILE CAP BEAM (C)

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS
M1001	STR	-	2320	24	43.71
M1002	STR	-	6020	10	47.26
M1501	BENT	90	520	48	39.19
C1501-1	BENT	65	3100	325	1581.78
C1501-2	BENT	65	2680	1	4.21
C1501-3	BENT	65	2380	1	3.74
C1501-4	BENT	65	2380	1	3.74
C1501-5	BENT	65	1760	1	2.76
C1501-6	BENT	65	2780	1	4.36
C1501-7	BENT	65	2460	1	3.86
C1501-8	BENT	65	2080	1	3.27
C1501-9	BENT	65	1760	1	2.76
C1502	BENT	90	1700	300	800.70
C1503-1	BENT	90	2020	20	63.43
C1503-2	BENT	90	2260	5	17.74
C1503-3	BENT	90	2020	5	15.86
C1503-4	BENT	90	2290	5	17.98
C1503-5	BENT	90	2030	5	15.94
C1504	BENT	90	1710	40	107.39
C1505-1	STR	-	14630	7	160.78
C1505-2	STR	-	1475	7	16.21
C1505-3	STR	-	15110	2	47.45
C1505-4	STR	-	15345	2	48.18
C1505-5	STR	-	15580	2	48.92
C1505-6	STR	-	15815	2	49.66
C1505-7	STR	-	16050	5	125.99
C1505-8	STR	-	8130	7	89.35
C1505-9	STR	-	8120	7	89.24
C1505-10	STR	-	8105	2	25.45
C1505-11	STR	-	8095	2	25.42
C1505-12	STR	-	8085	2	25.39
C1505-13	STR	-	8075	2	25.36
C1505-14	STR	-	8065	5	63.31
C1505-15	STR	-	7000	7	76.93
C1505-16	STR	-	7175	7	78.85
C1505-17	STR	-	7350	2	23.08
C1505-18	STR	-	7520	2	23.61
C1505-19	STR	-	7690	2	24.15
C1505-20	STR	-	7865	2	24.70
C1505-21	STR	-	8035	5	63.07
C1505-22	STR	-	11515	7	126.55
C1505-23	STR	-	11565	7	127.10
C1505-24	STR	-	11615	2	36.47
C1505-25	STR	-	11670	2	36.64
C1505-26	STR	-	11720	2	36.80
C1505-27	STR	-	11770	2	36.96
C1505-28	STR	-	11820	5	92.79
TOTAL MASS OF REINFORCING STEEL (BLACK) (kg):					4428.06



METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED

UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE — DATE

NOTE:

LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

BM 23-018 ELEV 235.300 m — S.E. Cor. Notre Dame Ave. & Sherwin Rd., Tblt. in W. Conc. foundation No. 2070 Notre Dame Ave., 0.8 m S. & 0.7 m below Conc. block of N.W. Cor. of bldg.

No.	REVISIONS	YY/MM/DD	BY
C	ISSUED FOR TENDER	22/05/10	BE
B	ISSUED FOR 95% REVIEW	22/04/06	BE
A	ISSUED FOR 50% REVIEW	22/03/14	BE

MORRISON HERSHFIELD

DESIGNED BY	AGG	CHECKED BY	TH
DRAWN BY	ALP	APPROVED BY	BE
HOR SCALE / VERT SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION BY: VAIBHAV BANTHIA, P.ENG.	
DATE	22/03/14	DATE	22/05/10

PROFESSIONAL'S SEAL: PROVINCE OF MANITOBA — A.D.G. GILARSKI — Member 32144 — 2022-05-10 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT FILE NAME: 220042500-Rte 90-Bill of Reinforcing.dwg

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MORRISON HERSHFIELD
No. 1736

TENDER No. 233-2022

Winnipeg

THE CITY OF WINNIPEG

PUBLIC WORKS DEPARTMENT

ENGINEERING DIVISION

REHABILITATION OF ROUTE 90 CULVERT OVER OMAND'S CREEK

BILL OF REINFORCING PILE CAP BEAM, BARRIER, SIDEWALK

CITY DRAWING NUMBER: C315-21-16

SHEET 16 OF 27

DRAWING NUMBER: 16

X:\Proj\2022\220042500-ccfw rte 90 culvert over omands cre\09_cad\07 sheets\220042500-Rte 90-Bill of Reinforcing.dwg Last Saved: 5/9/2022 4:39 PM by AHeppner Plotted: 5/10/2022 12:42 PM by Alex Heppner