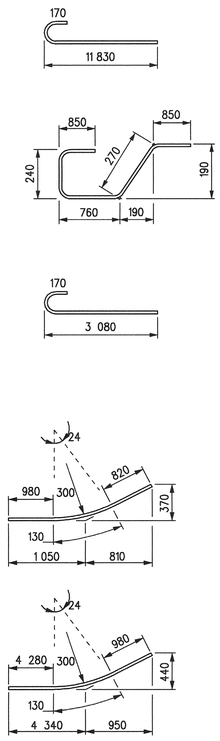
BILL OF REINFORCING STEEL (MMFX - 2) FOR STAGE 2 and 3 DECK

Site No. 2924-00

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS
D1608	STR		12 000	348	6511.57
D1609	STR		9 730	38	573.84
D1618	BENT	90	12 000	90	1676.16
D1619	STR		8 700	30	435.72
D1620	BENT	90	2 970	182	838.92
D1629	STR		2 460	16	61.09
D1632	STR		2 900	38	171.03
D1633	BENT	90	3 250	30	151.32
D1634	STR		18 000	76	2123.14
D1635	STR		10 480	38	619.54
D1636	STR		6 480	38	383.64
D1637	STR		9 430	38	556.14
D1638	BENT		1 940	12	36.13
D1639	BENT		5 400	168	1407.97
D1640	STR		13 500	60	1196.28
D1641	STR		7 290	30	339.39

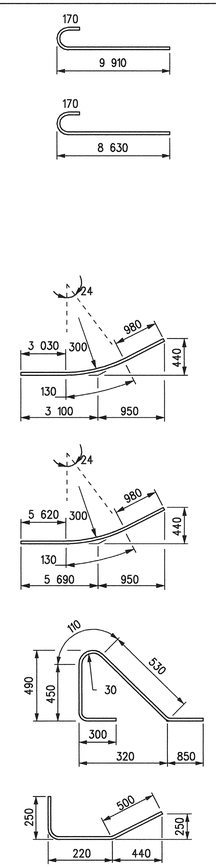
BENDING DIAGRAM



BILL OF REINFORCING STEEL (MMFX - 2) FOR STAGE 2 and 3 DECK

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS
D1642	BENT	90	10 080	30	469.32
D1643	BENT	90	8 800	30	409.73
D1644	STR		11 000	96	1638.91
D1645	STR		13 000	48	968.45
D1646	STR		9 120	233	3297.94
D1647	STR		4 260	6	39.67
D1648	STR		6 530	231	2341.08
D1649	STR		6 850	6	63.79
D1650	BENT		4 150	227	1462.06
D1651	BENT		6 740	226	2364.07
D1652	BENT	90	2 240	561	1950.31
D1653	BENT	90	970	1112	1674.05

BENDING DIAGRAM

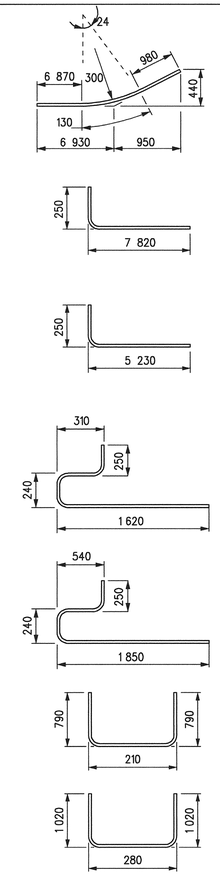


BILL OF REINFORCING STEEL (MMFX - 2) FOR STAGE 2 and 3 DECK

Site No. 2924-00

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS
D1654	BENT		7 990	168	2083.28
D1655	BENT	90	8 070	173	2166.76
D1656	STR		5 500	6	51.22
D1657	BENT	90	5 480	173	1471.36
D1658	STR		8 090	6	75.33
D1659	BENT	100	2 420	8	30.05
D1660	BENT	100	2 880	8	35.76
D1661	BENT	90	1 790	8	22.23
D1662	BENT	90	2 320	8	28.81
D1663	STR		1 080	4	6.70

BENDING DIAGRAM

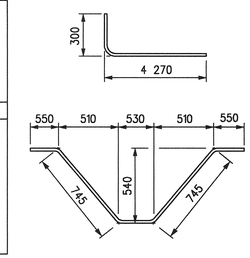


BILL OF REINFORCING STEEL (MMFX - 2) FOR STAGE 2 and 3 DECK

Site No. 2924-00

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS
1678	STR		8 000	47	583.55
1902	BENT	100	4 570	343	3503.38
D1903	BENT	100	3 125	8	55.88

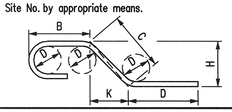
BENDING DIAGRAM



Total mass of reinforcing steel	43 874.95 kg
Total volume of structural concrete	351.67 m³

NOTES:

1. All dimensions given in bending diagram are out to out, except radii and extensions on 90°, 135° & 180° hooks. Extensions on 90°, 135° & 180° hooks are the "A" or "G" dimensions for standard 90°, 135° & 180° hooks referenced from the RSIC "Manual of Standard Practice". Radii are inside dimensions. All reinforcing steel bends and hooks for low carbon chromium steel bars shall conform to the same requirements listed for C.S.A. G30.18 Grade 400W in Clause 6.6.2 of C.S.A. A23.1-04, unless noted otherwise in the BILL OF REINFORCING STEEL (MMFX - 2).
2. All reinforcing steel shall be deformed steel, unless noted otherwise in the BILL OF REINFORCING STEEL (MMFX - 2)
3. All reinforcing steel shall be low carbon chromium steel bars conforming to ASTM A615 Grade 75 and ASTM A1035 unless noted otherwise in the BILL OF REINFORCING STEEL (MMFX - 2)
4. Like bars shall be bundled, securely tied and identified as to Mark and Site No. by appropriate means. All other items to be identified in a similar fashion.
5. All bars shall be bent in accordance with the following detail:



REVISIONS		
DATE	BY	DESCRIPTION

PROVINCE OF MANITOBA
MAR. 15/10
S.S. RIHAL
REGISTERED PROFESSIONAL ENGINEER

DECK REPLACEMENT - STAGE 2 & 3 - REINFORCING DETAILS

RECONSTRUCTION AND STRENGTHENING OF EXISTING BRIDGE
OVER ASSINIBOINE RIVER - CONTRACT THREE
ON P.T.H. No. 100 IN R.L.'S 72, 73 & 94
PARISH OF ST. CHARLES

CITY OF WINNIPEG

Manitoba
Infrastructure and Transportation
Water Control & Structures

RELEASED FOR CONSTRUCTION BY:
Ruth Foden March 15/10
DIRECTOR — DATE
STRUCTURES, DESIGN AND CONSTRUCTION BRANCH

DESIGN	BY: M.B.C.	SCALE: As Shown
	CHECKED: S.S.R.	SHEET No. 88
DETAILS	BY: D.P.W.	
	CHECKED: S.S.R./J.J.	SITE No. 2924-00

...\292400_Deck Reinforcing_Contract 3.dgn 2010-03-10 9:56:20 AM