



Ministère de l'Éducation
Et de la Formation Professionnelle

Direction du Génie Scolaire

Modèle Béton Armé

Cahier d'exécution pour la construction de bâtiments scolaires
à deux niveaux en béton armé et à toiture plate



CAHIER 3a
METRES ET LISTE DES FERS
TYPOLOGIE « A » 6 salles de 50 m²

Port-au-Prince, octobre 2012

METRE MODELE BETON ARME
 TYPOLOGIE "A" / 6 salles de 50 m2

1 Volume Béton

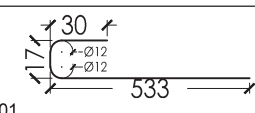
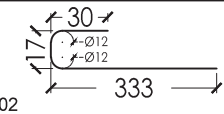
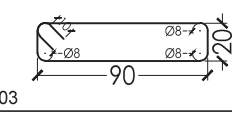
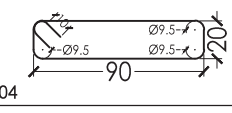
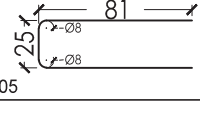
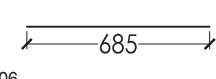
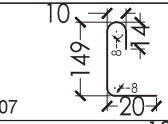
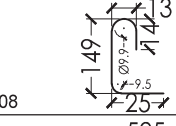
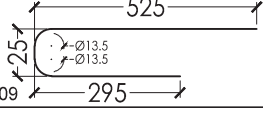
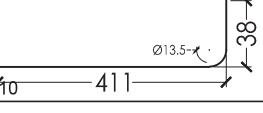
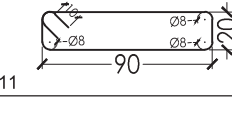
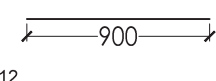
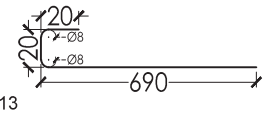
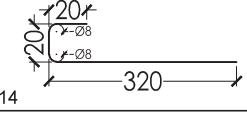
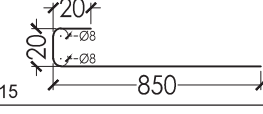
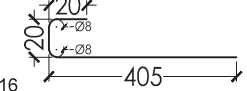
Description	Longueur m	Largeur m	Hauteur m	Quantité	Volume m3
Semelle fondation	78.50	1.00	0.30	1.00	23.55
Mur fondation	80.45	0.35	1.15	1.00	32.38
Dalle parquet	25.10	7.00	0.15	1.00	26.36
Dalle RDC	25.00	10.50	0.16	1.00	42.00
Poutres longitudinales RDC	25.00	0.25	0.20	2.00	2.50
Poutres transversales RDC 25cm	10.50	0.25	0.20	4.00	2.10
Poutres transversales RDC 160cm	10.50	1.60	0.14	3.00	7.06
Dalle toiture	29.00	10.90	0.16	1.00	50.58
Poutres longitudinale toiture	29.00	0.25	0.20	2.00	2.90
Poutres transversale toiture 25 cm	10.90	0.25	0.20	4.00	2.18
Poutres transversale toiture 160 cm	10.50	1.60	0.14	-	-
Voile longitudinal	1.60	0.25	5.60	6.00	13.44
Voile transversal	1.60	0.25	5.60	8.00	17.92
Semelle fondation escalier	1.60	1.00	0.25	-	-
Mur fondation escalier	1.60	0.35	1.20	-	-
Poteau escalier	0.25	0.25	2.55	2.00	0.32
Poutre palier escalier	1.60	0.25	0.35	2.00	0.28
Volet 1 escalier	2.80	1.60	0.22	2.00	1.97
Palier 1 escalier	1.30	1.60	0.16	2.00	0.67
Volet 2 escalier	3.20	1.60	0.20	2.00	2.05
Palier 2 escalier	1.75	1.60	0.16	2.00	0.90
Poutre chainage escalier	1.60	0.25	0.35	2.00	0.28
Total					229.44

METRE MODELE BETON ARME
 TYPOLOGIE "A" / 6 salles de 50 m2

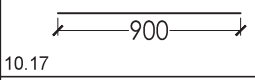
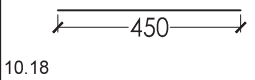
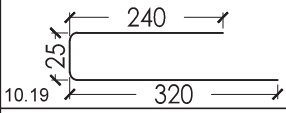
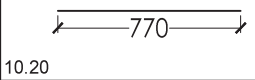
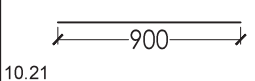
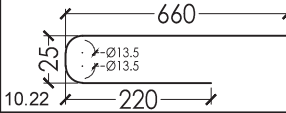
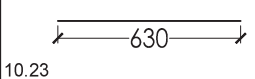
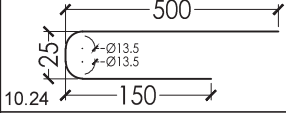
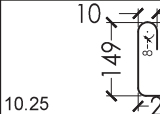
2 Surface Coffrée

Description	Longueur m	Largeur m	Hauteur m	Quantité	Surface m2
Semelle fondation	78.50	1.00	0.30	1.00	47.70
Mur fondation	80.45	0.35	1.15	1.00	185.84
Dalle parquet	25.10	7.00	0.15	1.00	9.63
Dalle RDC	25.00	10.50	0.16	1.00	273.86
Poutres longitudinales RDC	25.00	0.25	0.20	2.00	32.50
Poutres transversales RDC 25 cm	10.50	0.25	0.20	4.00	27.30
Poutres transversale RDC 160 cm	10.50	1.60	0.14	3.00	59.22
Dalle toiture	29.00	10.90	0.16	1.00	328.87
Poutres longitudinales toiture	29.00	0.25	0.20	2.00	37.70
Poutres transversales toiture 25 cm	10.90	0.25	0.20	4.00	28.34
Poutres transversale toiture 160 cm	10.50	1.60	0.14	-	-
Voile longitudinal	1.60	0.25	5.60	6.00	124.32
Voile transversal	1.60	0.25	5.60	8.00	165.76
Semelle escalier	1.60	1.00	0.25	-	-
Mur escalier	1.60	0.35	1.20	-	-
Poteau escalier	0.25	0.25	2.55	2.00	2.68
Poutre palier escalier	1.60	0.25	0.35	2.00	2.59
Volet 1 escalier	2.80	1.60	0.22	2.00	3.87
Palier 1 escalier	1.30	1.60	0.16	2.00	4.99
Volet 2 escalier	3.20	1.60	0.20	2.00	12.80
Palier 2 escalier	1.75	1.60	0.16	2.00	9.61
Poutre chainage escalier	1.60	0.25	0.35	2.00	3.04
Total					1'360.62

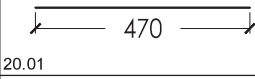
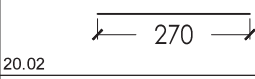
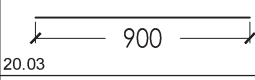
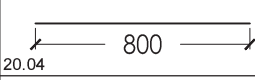
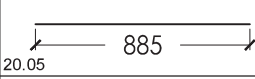
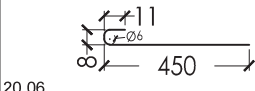
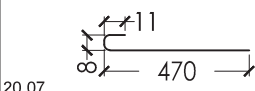
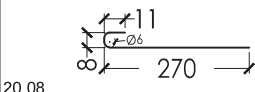
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Fondation								
10.01	Trans. Semelle Princ. avec crochet	6	5.80	48	278.40		2.24	623.62
10.02	Trans. Semelle Princ. avec crochet	6	3.80	48	182.40		2.24	408.58
10.03	Cadre Φ½"	4	2.40	48	115.20		0.996	114.74
10.04	Cadre Φ¾"	5	2.40	84	201.60		1.556	313.69
10.05	Trans. mur Princ. avec crochet en U	4	1.90	56	106.40		0.996	105.97
10.06	Trans. mur Princ. sans crochet	4	6.85	56	383.60		0.996	382.07
10.07	Cadre Φ½"	4	1.95	144	280.80		0.996	279.68
10.08	Cadre Φ¾"	5	2.05	168	344.40		1.556	535.89
10.09	Trans. Ceint.Princ. avec crochet en U	7	8.45	32	270.40		3.049	824.45
10.10	Trans. Ceint.Princ. avec crochet en L	7	4.50	16	72.00		3.049	219.53
10.11	Cadre Φ½"	4	2.40	222	532.80		0.996	530.67
10.12	Long. Semelle Princ. sans crochet	4	9.00	48	432.00		0.996	430.27
10.13	Long. Semelle Princ. Avec crochet	4	7.30	12	87.60		0.996	87.25
10.14	Long. Semelle Princ. Avec crochet	4	3.60	12	43.20		0.996	43.03
10.15	Long. Semelle Princ. Avec crochet	4	8.90	12	106.80		0.996	106.37
10.16	Long. Semelle Princ. Avec crochet	4	4.50	12	54.00		0.996	53.78

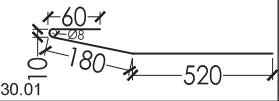
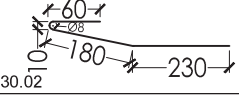
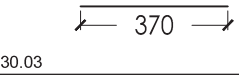
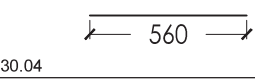
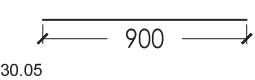
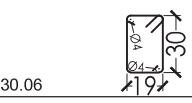

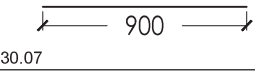
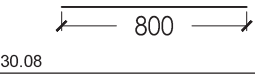
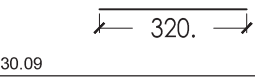
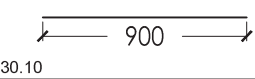
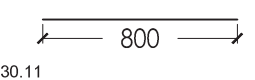
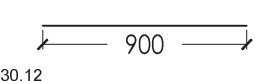
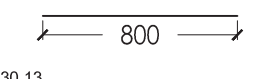

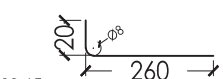

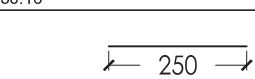
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Fondation								
10.17	Long. mur Princ. sans crochet	4	9.00	56	504.00		0.996	501.98
10.18	Long. mur Princ. sans crochet	4	4.50	14	63.00		0.996	62.75
10.19	Long. mur Princ. Avec crochet	4	5.90	28	165.20		0.996	164.54
10.20	Long. mur Princ. sans crochet	4	7.70	14	107.80		0.996	107.37
10.21	Long. Ceint.Princ. sans crochet	7	9.00	24	216.00		3.049	658.58
10.22	Long. Ceint.Princ. Avec crochet	7	8.90	12	106.80		3.049	325.63
10.23	Long. Ceint.Princ. avec crochett	7	6.30	24	151.20		3.049	461.01
10.24	Long. Ceint.Princ. sans crochet	7	6.80	4	27.20		3.049	82.93
10.25	Cadre Ø½"	4	1.90	480	912.00		0.996	908.35
								8,332.73

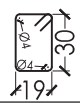
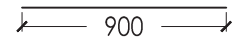
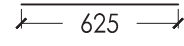

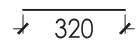
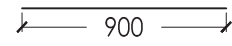
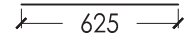
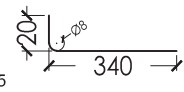
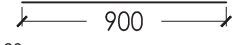


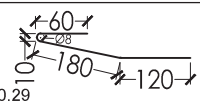
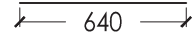
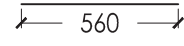
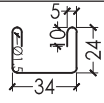
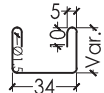
Bordereau Armature Btiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Parquet								
20.01	Nappe 1 1	3	4.70	162	761.40		0.561	427.15
20.02	Nappe 1 2	3	2.70	162	437.40		0.561	245.38
20.03	Nappe 2 1	3	9.00	88	792.00		0.561	444.31
20.04	Nappe 2 2	3	8.00	44	352.00		0.561	197.47
20.05	Nappe 3 1	3	8.85	88	778.80		0.561	436.91
20.06	Nappe 3 2 avec crochet	3	4.70	88	413.60		0.561	232.03
20.07	Nappe 4 1 avec crochet	3	4.90	162	793.80		0.561	445.32
20.08	Nappe 4 2 avec crochet	3	2.90	162	469.80		0.561	263.56
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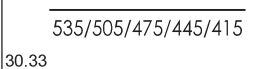
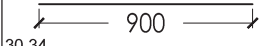
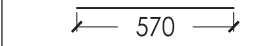
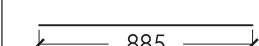
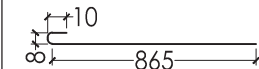
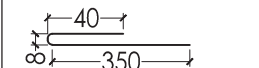
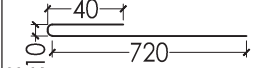
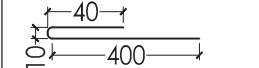
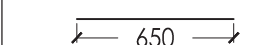
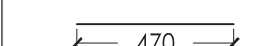
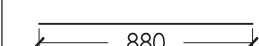
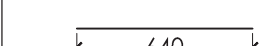
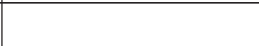
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Dalle								
30.01	Poutre chainage C-1 / Princ. Inf 1	4	7.70	8	61.60		0.996	61.35
30.02	Poutre chainage C-1 / Princ. Inf 2	4	4.80	8	38.40		0.996	38.25
30.03	Poutre chainage C-1 / Princ. Inf 3 (interieur)	4	3.70	4	14.80		0.996	14.74
30.04	Poutre chainage C-1 / Princ. Sup 1	4	5.60	16	89.60		0.996	89.24
30.05	Poutre chainage C-1 / Montage	3	9.00	8	72.00		0.561	40.39
30.06	Poutre chainage C-1 / Cadre	3	1.20	124	148.80		0.561	83.48
30.06'	Poutre chainage C-1 / Cadre port-a-faux hauteur variable	3	1.20	120	144.00		0.561	80.78
30.07	Poutre chainage C-2 / Princ. Inf 1	4	9.00	4	36.00		0.996	35.86
30.08	Poutre chainage C-2 / Princ. Inf 2	4	8.00	2	16.00		0.996	15.94
30.09	Poutre chainage C-2 / Princ. Inf 3 (interieur)	4	3.20	6	19.20		0.996	19.12
30.10	Poutre chainage C-2 / Princ. Sup 1	4	9.00	4	36.00		0.996	35.86
30.11	Poutre chainage C-2 / Princ. Sup 2	4	8.00	2	16.00		0.996	15.94
30.12	Poutre chainage C-2 / Montage 1	3	9.00	4	36.00		0.561	20.20
30.13	Poutre chainage C-2 / Montage 2	3	8.00	2	16.00		0.561	8.98
30.14	Poutre chainage C-2 / Cadre	3	1.20	168	201.60		0.561	113.10
30.15	Poutre chainage C-2' / Princ. Inf avec crochet	4	2.80	4	11.20		0.996	11.16
30.16	Poutre chainage C-2' / Princ. Sup avec crochet	4	2.80	8	22.40		0.996	22.31
30.17	Poutre chainage C-2' / Montage	3	2.50	4	10.00		0.561	5.61

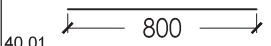
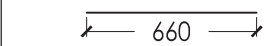
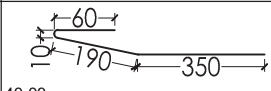
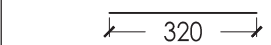
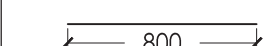

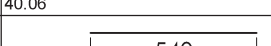

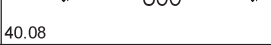
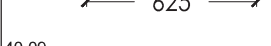
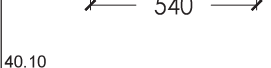


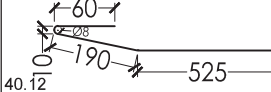


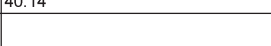
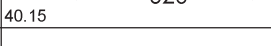
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Dalle 30.18	Poutre chainage C-2' / Cadre	3	1.20	28	33.60		0.561	18.85
30.19	Poutre chainage C-3 / Princ. Inf 1	4	9.00	2	18.00		0.996	17.93
30.20	Poutre chainage C-3 / Princ. Inf 2	4	6.25	4	25.00		0.996	24.90
30.21	Poutre chainage C-3 / Princ. Inf 3 avec crochet	4	3.60	4	14.40		0.996	14.34
30.22	Poutre chainage C-3 / Princ. Inf 4 (interieur)	4	3.20	6	19.20		0.996	19.12
30.23	Poutre chainage C-3 / Princ. Sup 1	4	9.00	2	18.00		0.996	17.93
30.24	Poutre chainage C-3 / Princ. Sup 2	4	6.25	4	25.00		0.996	24.90
30.25	Poutre chainage C-3 / Princ. Sup 3 avec crochet	4	3.60	4	14.40		0.996	14.34
30.26	Poutre chainage C-3 / Montage 1	3	9.00	4	36.00		0.561	20.20
30.27	Poutre chainage C-3 / Montage 2	3	8.00	2	16.00		0.561	8.98
30.28	Poutre chainage C-3 / Cadre	3	1.20	168	201.60		0.561	113.10
30.29	Poutre chainage C-4 / Princ. Inf 1	4	3.60	66	237.60		0.996	236.65
30.30	Poutre chainage C-4 / Princ. Inf 2	5	6.40	33	211.20		1.556	328.63
30.31	Poutre chainage C-4 / Princ. Sup	4	5.60	66	369.60		0.996	368.12
30.32	Poutre chainage C-4 / Cadre	3	1.10	366	402.60		0.561	225.86
30.32'	Poutre chainage C-4 / Cadre port-a-faux hauteur variable	3	1.10	228	250.80		0.561	140.70


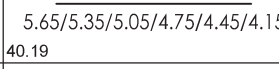
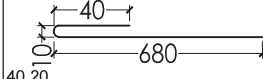
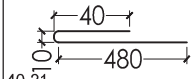
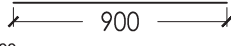
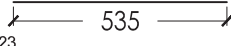
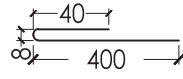
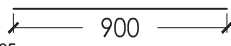


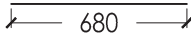
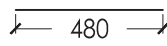
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Dalle								
30.33	Dalle / Angle (2 x 5.35/5.05/4.75/4.45/4.15)	4	4.75	10	47.50		0.996	47.31
30.34	Dalle / Nappe 1 1	3	9.00	26	234.00		0.561	131.27
30.35	Dalle / Nappe 1 2	3	5.70	13	74.10		0.561	41.57
30.36	Dalle / Nappe 1 3	3	8.85	56	495.60		0.561	278.03
30.37	Dalle / Nappe 1 4 avec crochet	3	8.85	112	991.20		0.561	556.06
30.38	Dalle / Nappe 1 5 avec crochet	3	4.00	26	104.00		0.561	58.34
30.39	Dalle / Nappe 2 1 avec crochet	4	7.70	132	1,016.40		0.996	1,012.33
30.40	Dalle / Nappe 2 2 avec crochet	4	4.50	132	594.00		0.996	591.62
30.41	Dalle / Nappe 3 1	4	6.50	132	858.00		0.996	854.57
30.42	Dalle / Nappe 3 2	4	4.70	132	620.40		0.996	617.92
30.43	Dalle / Nappe 4 1	4	8.80	276	2,428.80		0.996	2,419.08
30.44	Dalle / Nappe 4 2	4	6.40	26	166.40		0.996	165.73
30.45	Dalle / Nappe 4 3	4	4.70	112	526.40		0.996	524.29
								9,604.98

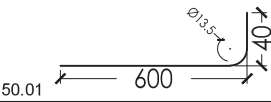
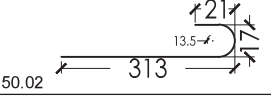
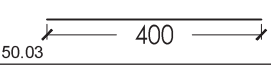
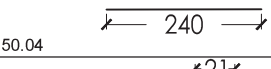
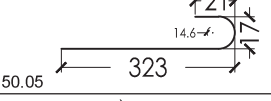
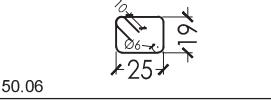
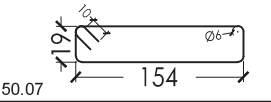
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Toiture								
40.01	Poutre chainage C-5 / Princ. Inf 1	4	8.00	4	32.00		0.996	31.87
40.02	Poutre chainage C-5 / Princ. Inf 2	4	6.60	8	52.80		0.996	52.59
40.03	Poutre chainage C-5 / Princ. Inf 4 avec crochet	4	6.10	8	48.80		0.996	48.60
40.04	Poutre chainage C-5 / Princ. Inf 3 (interieur)	4	3.20	12	38.40		0.996	38.25
40.05	Poutre chainage C-5 / Princ. Sup 1	4	8.00	4	32.00		0.996	31.87
40.06	Poutre chainage C-5 / Princ. Sup 2	4	6.60	8	52.80		0.996	52.59
40.07	Poutre chainage C-5 / Princ. Sup 3	4	5.40	8	43.20		0.996	43.03
40.08	Poutre chainage C-5 / Montage 1	3	8.00	4	32.00		0.561	17.95
40.09	Poutre chainage C-5 / Montage 2	3	6.25	8	50.00		0.561	28.05
40.10	Poutre chainage C-5 / Montage 3	3	5.40	8	43.20		0.561	24.24
40.11	Poutre chainage C-5 / Cadre	3	1.10	336	369.60		0.561	207.35
40.11'	Poutre chainage C-5 / Cadre hauteur variable	3	1.10	64	70.40		0.561	39.49
40.12	Poutre chainage C-6 / Princ. Inf 1	4	7.85	8	62.80		0.996	62.55
40.13	Poutre chainage C-6 / Princ. Inf 2	4	5.00	8	40.00		0.996	39.84
40.14	Poutre chainage C-6 / Princ. Inf 3 (interieur)	4	3.70	4	14.80		0.996	14.74
40.15	Poutre chainage C-6 / Princ. Sup 1	4	6.20	16	99.20		0.996	98.80
40.16	Poutre chainage C-6 / Princ. Sup - Montage	4	6.90	8	55.20		0.996	54.98
40.17	Poutre chainage C-6 / Montage	3	5.50	16	88.00		0.561	49.37

Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Toiture								
40.18	Poutre chainage C-6 / Cadre	3	1.20	256	307.20		0.561	172.34
40.19	Dalle / Angle {4x2x(5.35/5.05/4.75/4.45/4.15)+(1x5.65)}	4	5.00	36	180.00		0.996	179.28
40.20	Dalle / Nappe 1 1 avec crochet	4	7.40	190	1,406.00		0.996	1,400.38
40.21	Dalle / Nappe 1 2 avec crochet	4	5.40	190	1,026.00		0.996	1,021.90
40.22	Dalle / Nappe 2 1	3	9.00	142	1,278.00		0.561	716.96
40.23	Dalle / Nappe 2 2	3	5.35	71	379.85		0.561	213.10
40.24	Dalle / Nappe 2 3 avec crochet	3	4.50	142	639.00		0.561	358.48
40.25	Dalle / Nappe 3 1	4	9.00	142	1,278.00		0.996	1,272.89
40.26	Dalle / Nappe 3 2	4	6.00	71	426.00		0.996	424.30
40.27	Dalle / Nappe 3 3	4	4.00	142	568.00		0.996	565.73
40.28	Dalle / Nappe 4 1	4	6.80	190	1,292.00		0.996	1,286.83
40.29	Dalle / Nappe 4 2	4	4.80	190	912.00		0.996	908.35
								9,456.70

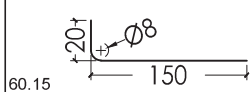
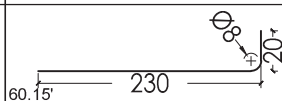


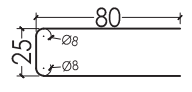
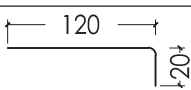
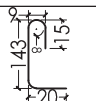
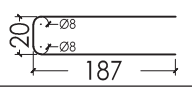
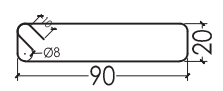
Bordereau Armature Batiment A - Acier HA - Grade 60

Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Voiles								
50.01	Armature Princ. Brod 1	7	6.40	224	1,433.60		3.049	4,371.05
50.02	Armature Princ. Brod 2	7	3.40	112	380.80		3.049	1,161.06
50.03	Armature Princ. Interieur 1	4	4.00	168	672.00		0.996	669.31
50.04	Armature Princ. Interieur 2	4	2.40	168	403.20		0.996	401.59
50.05	Armature Princ. Interieur 3	4	3.50	280	980.00		0.996	976.08
50.06	Etrier	3	1.10	448	492.80		0.561	276.46
50.07	Cadre	3	3.70	672	2,486.40		0.561	1,394.87
								9,250.42

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Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Escaliers								
60.01	Princ. 1	3	1.50	22	33.00		0.561	18.51
60.02	Princ. 2	3	3.00	22	66.00		0.561	37.03
60.03	Princ. 3	3	2.00	22	44.00		0.561	24.68
60.04	Princ. 4	4	2.30	22	50.60		0.996	50.40
60.05	Princ. 5	3	3.75	22	82.50		0.561	46.28
60.06	Princ. 6	3	1.55	22	34.10		0.561	19.13
60.07	Princ. 7	3	1.40	22	30.80		0.561	17.28
60.08	Princ. 8	4	2.50	22	55.00		0.996	54.78
60.09	Princ. 9	4	2.45	22	53.90		0.996	53.68
60.10	Transv. 1	3	1.40	100	140.00		0.561	78.54
60.11	Transv. 2 Palier	4	1.40	24	33.60		0.996	33.47
60.12	Transv. pente Palier 1	3	1.20	16	19.20		0.561	10.77
60.13	Repartition. pente Palier 2 (2.5 / 2.0 / 1.5)	3	2.00	12	24.00		0.561	13.46
60.14	Repartition. pente Palier 3 (1.0 / 0.7 / 0.4)	3	0.70	24	16.80		0.561	9.42

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Pos.	Description	#	Longueur m	Quantité	Longueur Total	Croquis	Poids/ml	Poids Total
			[m]	[-]	[m]		[kg/m]	[kg]
Escaliers								
60.15	Poteau Princ	4	1.70	8	13.60		0.996	13.55
60.15'	Poteau Princ	4	2.50	8	20.00		0.996	19.92
60.16	Poteau Etrier	3	1.05	28	29.40		0.561	16.49
60.17	Etrier mur fondation	3	0.70	32	22.40		0.561	12.57
60.18	Princ. mur fondation en U	4	1.85	18	33.30		0.996	33.17
60.18'	Princ. mur fondation en L	4	1.40	36	50.40		0.996	50.20
60.19	Cadre mur fondation	4	1.90	76	144.40		0.996	143.82
60.20	Princ. semelle fondation	4	4.00	12	48.00		0.996	47.81
60.21	Cadre semelle fondation	4	2.40	32	76.80		0.996	76.49
881.45								