



Pêches et Océans  
Canada

Fisheries and Oceans  
Canada

Garde côtière

Coast Guard

# LATTICED STEEL TOWERS

## 2004 EDITION

HEIGHT 3m (10ft) @ 24,4m (80ft)

### DRAWINGS INDEX

ERECTING PLAN				SHOP DRAWING			
DWG no.	DRAWING TITLE	REVISION	REV. DATE	DRAW. No.	DRAWING TITLE	REVISION	REV. DATE
08733-02	3 m TOWER (10 ft)	4	2004-11-23	08733-21	GOUSSET, PLATES, BEARING PLATES & ANCHORAGE BOLT.	4	2005-04-06
08733-03	4,6 m TOWER (15 ft)	4	2004-11-23	08733-22	VERTICAL, HORIZONTAL & DIAGONAL STRUCT. MEMBERS	4	2005-04-06
08733-04	6,1 m TOWER (20 ft)	4	2004-11-23	08733-23	VERTICAL STRUCTURAL MEMBERS	3	2004-05-31
08733-05	7,6 m TOWER (25 ft)	4	2004-11-23	08733-24	LADDERS AND GRATINGS	3	2004-05-31
08733-06	9,1 m TOWER (30 ft)	4	2004-11-23	08733-25	UPPER DECK RAILING	3	2004-05-31
08733-07	10,7 m TOWER (35 ft)	4	2004-11-23	08733-26	UPPER DECK PARTS	3	2004-05-31
08733-08	12,2 m TOWER (40 ft)	4	2004-11-23	08733-27	TYPE "A-C" BEACON LIGHT ELECT. INSTALLATION DIAGRAMS	3	2004-05-31
08733-09	13,7 m TOWER (45 ft)	4	2004-11-23	08733-28	TYPE "E-F" BEACON LIGHT WITH SOLAR COLLECTOR	3	2004-05-31
08733-10	15,2 m TOWER (50 ft)	4	2004-11-23				
08733-11	16,8 m TOWER (55 ft)	4	2004-11-23	<b>OPTIONAL EQUIPMENT</b>			
08733-12	18,3 m TOWER (60 ft)	4	2004-11-23	08733-29	BATTERY BOX (FOR 2 OR 6 BATTERY)	3	2004-05-31
08733-13	19,8 m TOWER (65 ft)	5	2005-04-06	08733-30	SERVICE BOX	3	2004-01-08
08733-14	21,3 m TOWER (70 ft)	5	2005-04-06	08733-31	BATTERY BOX (FOR 2 BATTERY)	3	2004-05-31
08733-15	22,9 m TOWER (75 ft)	5	2005-04-06	08733-32	LIGHTING CONDUCTOR	3	2004-05-31
08733-16	24,4 m TOWER (80 ft)	5	2005-04-06	08733-33	MAINTENANCE PLATFORM SUPPORT	3	2005-04-04
08733-17	FONDATION AND ANCHORAGE, OPTION 1	3	2004-05-31	08733-34	DAVT CRANE FOR EQUIPMENT AND TOWER ERECTION	4	2004-11-23
08733-18	FONDATION AND ANCHORAGE, OPTION 2	4	2004-06-01				
08733-19	FONDATION AND ANCHORAGE, OPTION 3	4	2004-06-01	<b>DRAWINGS ADDED TO THE 08733 SERIE OR FOR REFERENCE *</b>			
08733-20	CHAIN LINK FENCE	3	2004-05-31	08733-35	AIDS TO MARINE NAVIGATION SUPPORT PLATES	2	2005-04-27
				08906-01	MONORAIL D'ENTRETIEN POUR MDJ: COUPES ET DÉTAILS *	0	2005-03-29
				08906-02	MONORAIL D'ENTRETIEN POUR MDJ: PLAN D'UTILISATION *	0	2005-03-29
					* ENGLISH VERSION NOT AVAILABLE		

May 03, 2005

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 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7

MATERIAL LIST

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	4	25.0
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	1	8.3
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	9.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	8	104.4
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.7
X6	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-21	6	46.3
A5	D-RING ANCHORAGE PLATE FROM "SALA" MODEL #2101830	350 MPa	-	5	-
B1	PL 300 X 538 X 9.5	350 MPa	08733-21	8	96.3
B3	PL 229 X 150 X 6.4	350 MPa	08733-21	7	17.9
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	1	0.9
S2	FLAT BAR 51 X 6.4 X 508	350 MPa	08733-24	1	1.3
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	1	1.0
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	7	3.0
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BARS	08733-24	1	17.5
P11	GRATING 610 X 1219	W30-102/32x4.8 SERRATED BARS	08733-24	2	44.6
T17	ANCHOR BOLTS 25Ø	ASTM-A325M	08733-21	8	24.8
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C1	TOWER BASE	350 MPa	08733-21	4	121.6
E3	LADDER 3064	350 MPa	08733-24	1	32.2
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>938.8</b>

NOTE:  
 THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8831 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS

BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	276	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER 248mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER 248mm	ASTM-A325	S/O	2	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	6	S/O
EC1	ANCHOR BOLT NUTS 25Ø	240 MPa	08733-21 (T17)	24	S/O
RD1	ANCHOR BOLT WASHERS 25Ø	240 MPa	08733-21 (T17)	16	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, H=125mm	ASTM-A325 HY-150 FROM HLT1	08733-24 (E3)	2	S/O

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6164 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
 - "D-RING" ANCHORAGE CONNECTOR:  
 "NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME."  
 "MAXIMUM CAPACITY = 140 kg."  
 "MAXIMUM FREE FALL HEIGHT = 1.8m"

4	FALL ARRESTING DECK	P-C.G. 04-11-23
3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est référencé		
C	Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
 3m TOWER (10ft)  
 ERECTING PLAN

Conçu par:  
 Drawn by:  
**P.-C. GAGNON, Ing. 2003/05/30**

Dessiné par:  
 Drawn by:  
**ERIC GAGNON, tech. 2003/05/30**

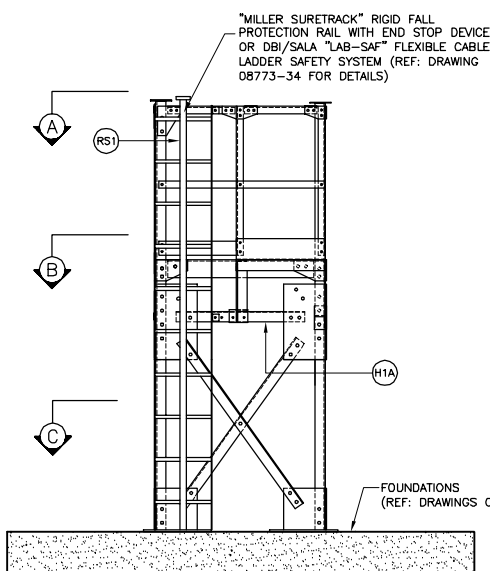
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 Verified by:  
**P.-C. GAGNON, Ing. 2003/05/30**

Approuvé par:  
 Approved by:

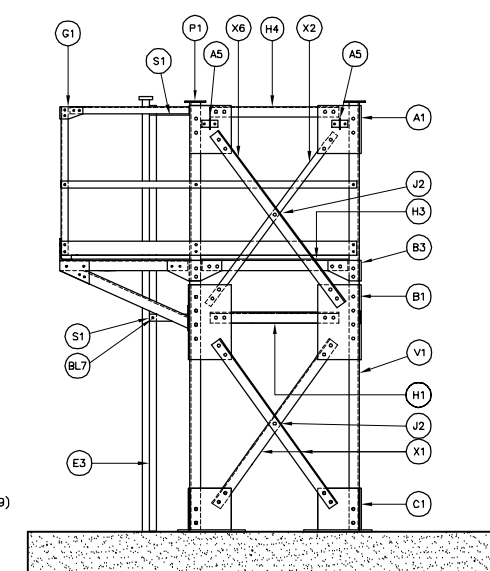
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 File no.:  
**08733**

Échelle:  
 Scale:  
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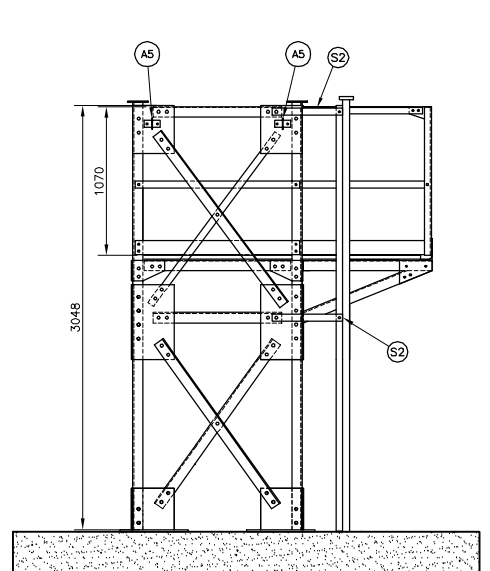
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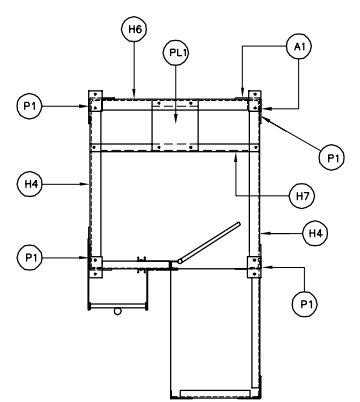
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 SCALE 1:25



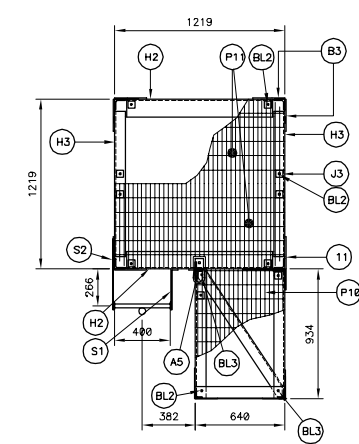
RIGHT ELEVATION  
 SCALE 1:25



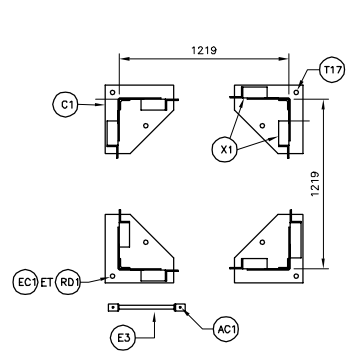
LEFT ELEVATION  
 SCALE 1:25



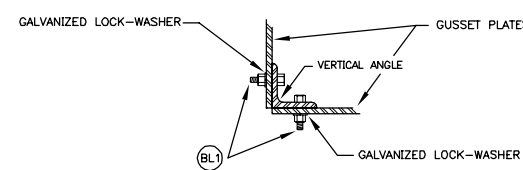
SECTION "A"  
 SCALE 1:25



SECTION "B"  
 SCALE 1:25



SECTION "C"  
 SCALE 1:25



BOLTING DETAIL (TYPE)  
 N.T.S.

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MATERIAL LIST

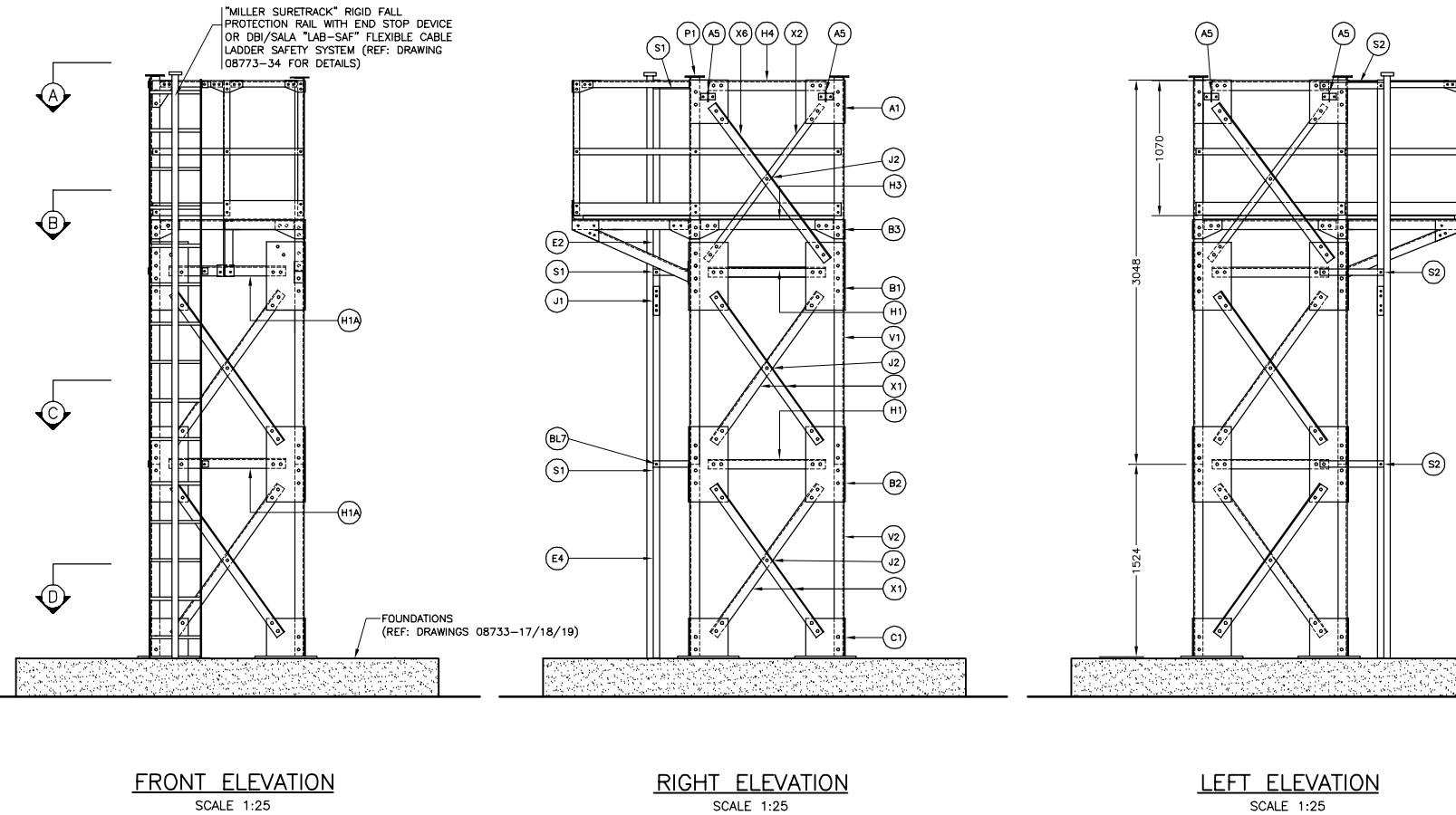
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3,2	350 MPa	08733-21	1	3,1
V1	L 76 X 76 X 9,5 X 3063	350 MPa	08733-23	4	131,1
V2	L 76 X 76 X 9,5 X 1514	350 MPa	08733-23	4	64,2
H1	L 76 X 76 X 7,9 X 925	350 MPa	08733-22	6	50
H1A	L 76 X 76 X 7,9 X 925	350 MPa	08733-22	2	16,7
H2	L 127 X 127 X 7,9 X 1047	350 MPa	08733-22	2	32,0
H3	L 76 X 76 X 7,9 X 1047	350 MPa	08733-22	2	18,8
H4	L 76 X 76 X 7,9 X 1047	350 MPa	08733-22	2	18,8
H6	L 76 X 76 X 7,9 X 1047	350 MPa	08733-22	1	9,4
H7	L 51 X 51 X 6,4 X 1219	350 MPa	08733-22	1	5,8
X1	L 76 X 76 X 7,9 X 1450	350 MPa	08733-22	18	234,9
X2	FLAT BAR 50 X 6,4 X 1527	350 MPa	08733-22	3	11,5
X6	L 76 X 76 X 7,9 X 1527	350 MPa	08733-22	3	41,2
A1	PL 345 X 300 X 9,5	350 MPa	08733-21	6	46,3
A2	PL 328 X 328 X 6,4	350 MPa	08733-21	4	23,5
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9,5	350 MPa	08733-21	8	96,3
B2	PL 300 X 600 X 9,5	350 MPa	08733-21	8	107,4
B3	PL 229 X 150 X 6,4	350 MPa	08733-21	7	17,9
S1	FLAT BAR 51 X 6,4 X 342	350 MPa	08733-24	2	1,8
S2	FLAT BAR 51 X 6,4 X 508	350 MPa	08733-24	2	2,6
S3	FLAT BAR 51 X 6,4 X 387	350 MPa	08733-24	2	2,0
J1	FLAT BAR 50 X 6,4 X 229	350 MPa	08733-24	2	1,2
J2	SPACER PL 76 X 76 X 9,5	350 MPa	08733-24	12	5,2
J3	SPACER PL 51 X 51 X 7,9	350 MPa	08733-24	12	1,9
P10	GRATING 916 X 640	W30-102/32x4,8 SERRATED BARS	08733-24	1	17,5
P11	GRATING 610 X 1219	W30-102/32x4,8 SERRATED BARS	08733-24	2	44,6
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	8	24,8
P1	PL 92 X 152 X 6,4	350 MPa	08733-21	4	2,8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119,8
C1	TOWER BASE	350 MPa	08733-21	4	121,8
E2	LADDER 1753	350 MPa	08733-24	1	18,7
E4	LADDER 2836	350 MPa	08733-24	1	29,4
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>1318,5</b>

NOTE:  
THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8631 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS

BL	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	385	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	17	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	24	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	16	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, L125mm	ASTM-A325 HY-150 FROM HILTI	08733-24 (E3)	2	S/O

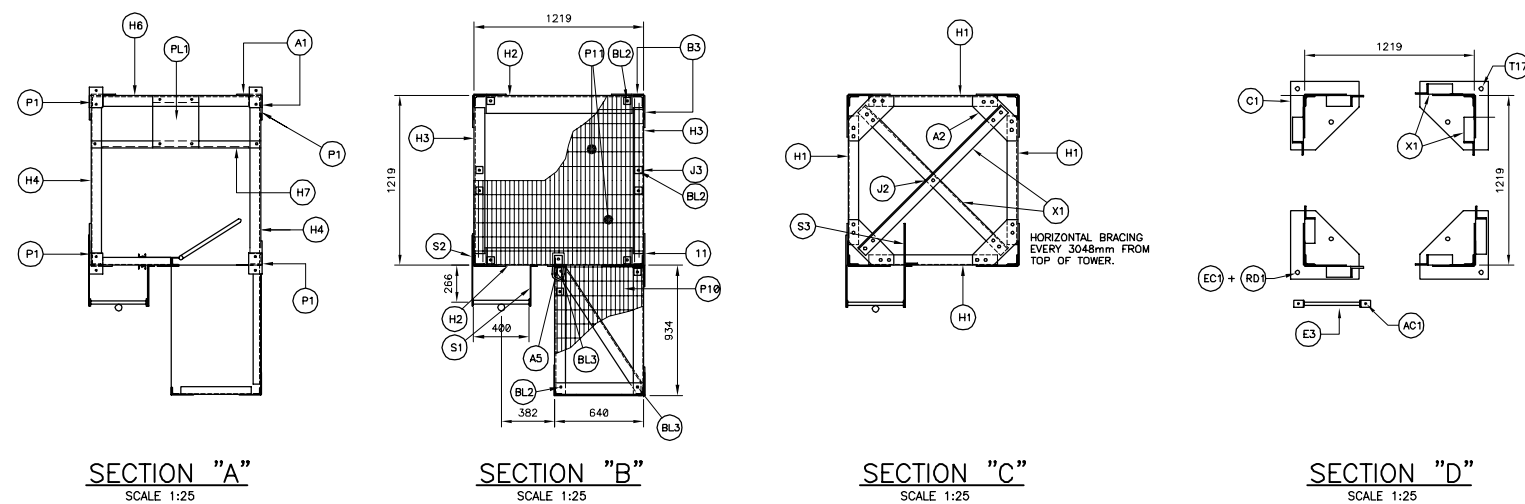
NOTES:  
- ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6164 (MINIMUM APPLICATION RATE = 800g/m<sup>2</sup>)  
- BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.



FRONT ELEVATION  
SCALE 1:25

RIGHT ELEVATION  
SCALE 1:25

LEFT ELEVATION  
SCALE 1:25



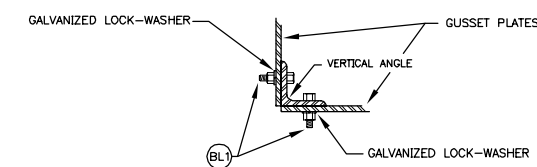
SECTION "A"  
SCALE 1:25

SECTION "B"  
SCALE 1:25

SECTION "C"  
SCALE 1:25

SECTION "D"  
SCALE 1:25

NOTES:  
- CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
- "D-RING" ANCHORAGE CONNECTOR:  
"NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME."  
"MAXIMUM CAPACITY = 140 kg."  
"MAXIMUM FREE FALL HEIGHT = 1.8m"



BOLTING DETAIL (TYPE)  
N.T.S.

Revisión	Description	Par/By	Date
4	FALL ARRESTING DEVICE	P.-C.G.	04-11-23
3	FOR CONSTRUCTION	P.-C.G.	04-05-31
2	DEFINITIVE	P.-C.G.	04-01-08
1	DEFINITIVE	P.-C.G.	03-12-23

A: Numéro du détail  
Detail no.  
B: Feuille sur laquelle le détail est référencé  
Location drawing no.  
C: Feuille sur laquelle le détail est dessiné  
Drawing no.

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SERVICES TECHNIQUES  
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Dossier:  
File:  
**LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
Drawing:  
4.6m TOWER (15ft)  
ERECTING PLAN

Conçu par:  
Designed by: **P.-C. GAGNON, Ing.** 2003/05/30  
Date  
Dessiné par:  
Drawn by: **ERIC GAGNON, tech.** 2003/05/30  
Date  
Vérifié par:  
Verified by: **P.-C. GAGNON, Ing.** 2003/05/30  
Date

Approuvé par:  
Approved by:  
No. dossier:  
File no.:  
Échelle:  
Scale:  
**INDICATED**  
No. dessin:  
Drawing no.:  
08733  
03

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**MATERIAL LIST**

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H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	9	74.9
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	3	25.0
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	9.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	26	339.3
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.7
X9	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-21	8	46.3
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J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W102-30/32x4.8 BARRÉS SOUDÉES DENTÉLÉES	08733-24	1	17.5
P11	GRATING 810 X 1219	W102-30/32x4.8 BARRÉS SOUDÉES DENTÉLÉES	08733-24	2	44.6
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	8	24.8
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C1	TOWER BASE	350 MPa	08733-21	4	121.6
E1	LADDER 3048	350 MPa	08733-24	1	31.8
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E5	LADDER 1296	350 MPa	08733-24	1	13.5
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>1644.6</b>

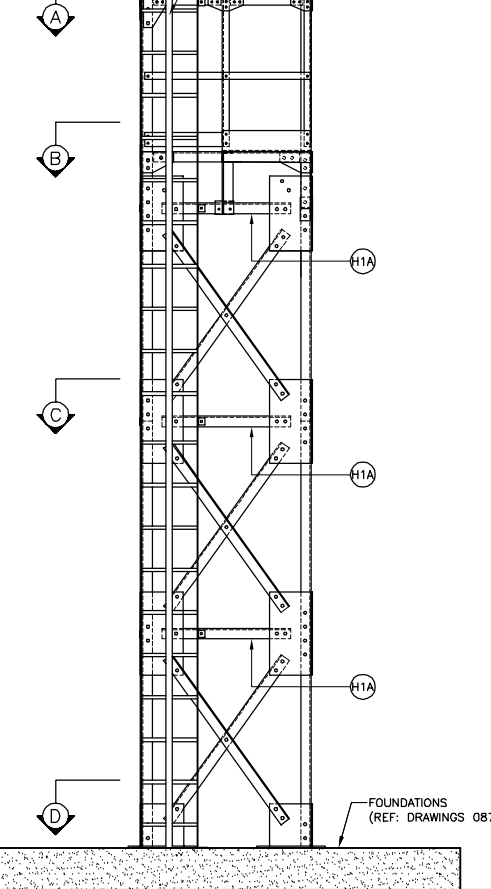
NOTE:  
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**BOLTS, NUTS AND WASHERS**

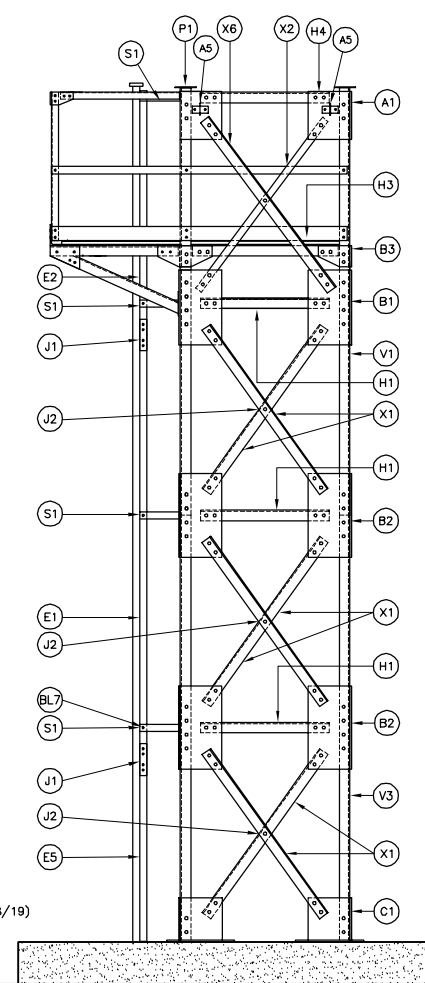
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BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL7	Ø13mm X 35mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	28	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	24	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	16	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, L=165mm	ASTM-A325, HY-150 FROM HILTI	08733-24 (E3)	2	S/O

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CAN/CSA-8164 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

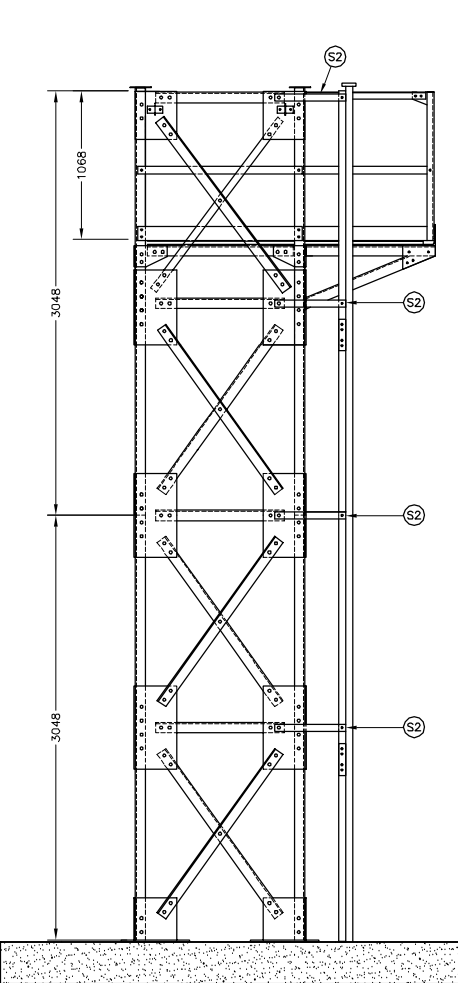
"MILLER SURETRACK" RIGID FALL PROTECTION RAIL WITH END STOP DEVICE OR DBI/SALA "LAB-SAF" FLEXIBLE CABLE LADDER SAFETY SYSTEM (REF: DRAWING 08773-34 FOR DETAILS)



**FRONT ELEVATION**  
SCALE 1:25

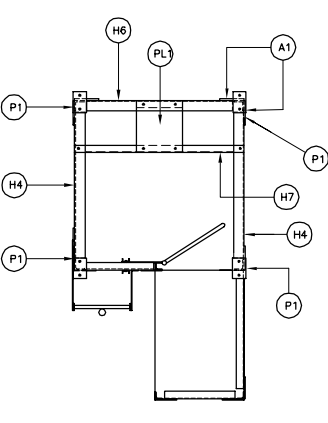


**RIGHT ELEVATION**  
SCALE 1:25

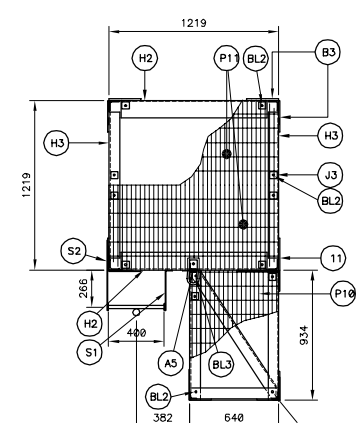


**LEFT ELEVATION**  
SCALE 1:25

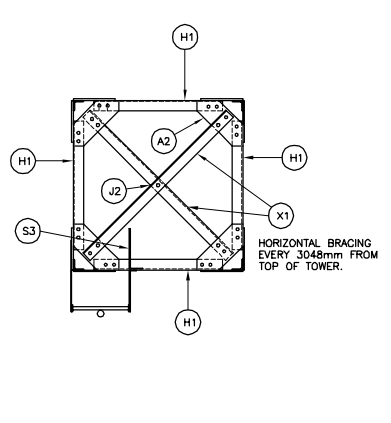
FOUNDATIONS (REF: DRAWINGS 08733-17/18/19)



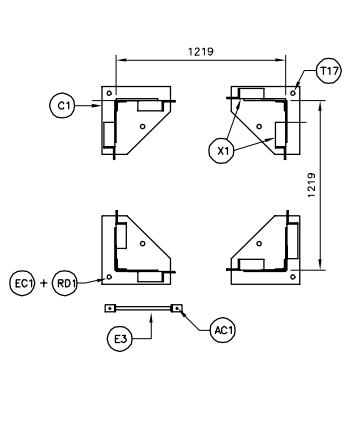
**SECTION "A"**  
SCALE 1:25



**SECTION "B"**  
SCALE 1:25



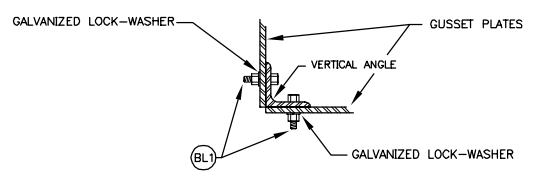
**SECTION "C"**  
SCALE 1:25



**SECTION "D"**  
SCALE 1:25

HORIZONTAL BRACING EVERY 3048mm FROM TOP OF TOWER.

NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
 - "D-RING" ANCHORAGE CONNECTOR:  
 \*NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
 \*MAXIMUM CAPACITY = 140 kg.  
 \*MAXIMUM FREE FALL HEIGHT = 1.8m



**BOLTING DETAIL (TYPE)**  
N.T.S.

4	FALL ARRESTING DEVICE	P-C.G. 04-11-23
3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	A: Numéro du détail		
B	B: Feuille sur laquelle le détail est référencé		
C	C: Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
 6.1m TOWER (20ft)  
 ERECTING PLAN

Conçu par:	Checked by:	Date
<b>P.-C. GAGNON, Ing.</b>		<b>2003/05/30</b>
Dessiné par:	Drawn by:	Date
<b>ERIC GAGNON, tech.</b>		<b>2003/05/30</b>
Vérifié par:	Verified by:	Date
<b>P.-C. GAGNON, Ing.</b>		<b>2003/05/30</b>
Approuvé par:	Approved by:	Date

No. dossier:	Échelle:
File no.:	Scale:
	<b>INDICATED</b>
No. dessin:	No. feuille:
Drawing no.:	Sheet no.:
	<b>08733 04</b>



Services techniques  
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 Québec (Québec) G1K 7Y7

### MATERIAL LIST

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V2	L 76 X 76 X 9.5 X 1514	350 MPa	08733-23	4	64.8
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	4	130.0
H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	12	100.0
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	4	33.3
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	9.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	32	417.6
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.7
X8	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-21	6	46.3
A2	PL 328 X 328 X 6.4	350 MPa	08733-21	8	46.9
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9.5	350 MPa	08733-21	8	96.3
B2	PL 300 X 600 X 9.5	350 MPa	08733-21	24	322.2
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	5	4.4
S2	FLAT BAR 51 X 6.4 X 508	350 MPa	08733-24	5	6.5
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	4	4.0
J1	FLAT BAR 50 X 6.4 X 229	350 MPa	08733-24	4	2.3
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	21	9.0
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102.3x4.8 SERRATED BARS	08733-24	1	17.5
P11	GRATING 610 X 1219	W30-102.3x4.8 SERRATED BARS	08733-24	2	44.6
T17	ANCHOR BOLTS 252	ASTM-A325M	08733-21	8	24.8
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C2	TOWER BASE	350 MPa	08733-21	4	179.5
E1	LADDER 3048	350 MPa	08733-24	1	31.8
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E6	LADDER 2945	350 MPa	08733-24	1	29.4
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
<b>TOTAL</b>				<b>2015.0</b>	

### BOLTS, NUTS AND WASHERS

BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	622	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	31	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	24	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	16	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, H=165mm	ASTM-A325, HY-150 FROM HILTI	08733-24 (E3)	2	S/O

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-614 (MINIMUM APPLICATION RATE = 800g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

Revisión	Description	Par/By	Date
4	FALL ARRESTING DEVICE	P.-C.	04-11-23
3	FOR CONSTRUCTION	P.-C.	04-04-31
2	DEPARTIVE	P.-C.	04-01-08
1	DEPARTIVE	P.-C.	03-12-23

A: Numéro du détail  
 B: Feuille sur laquelle le détail est référencé  
 C: Feuille sur laquelle le détail est dessiné

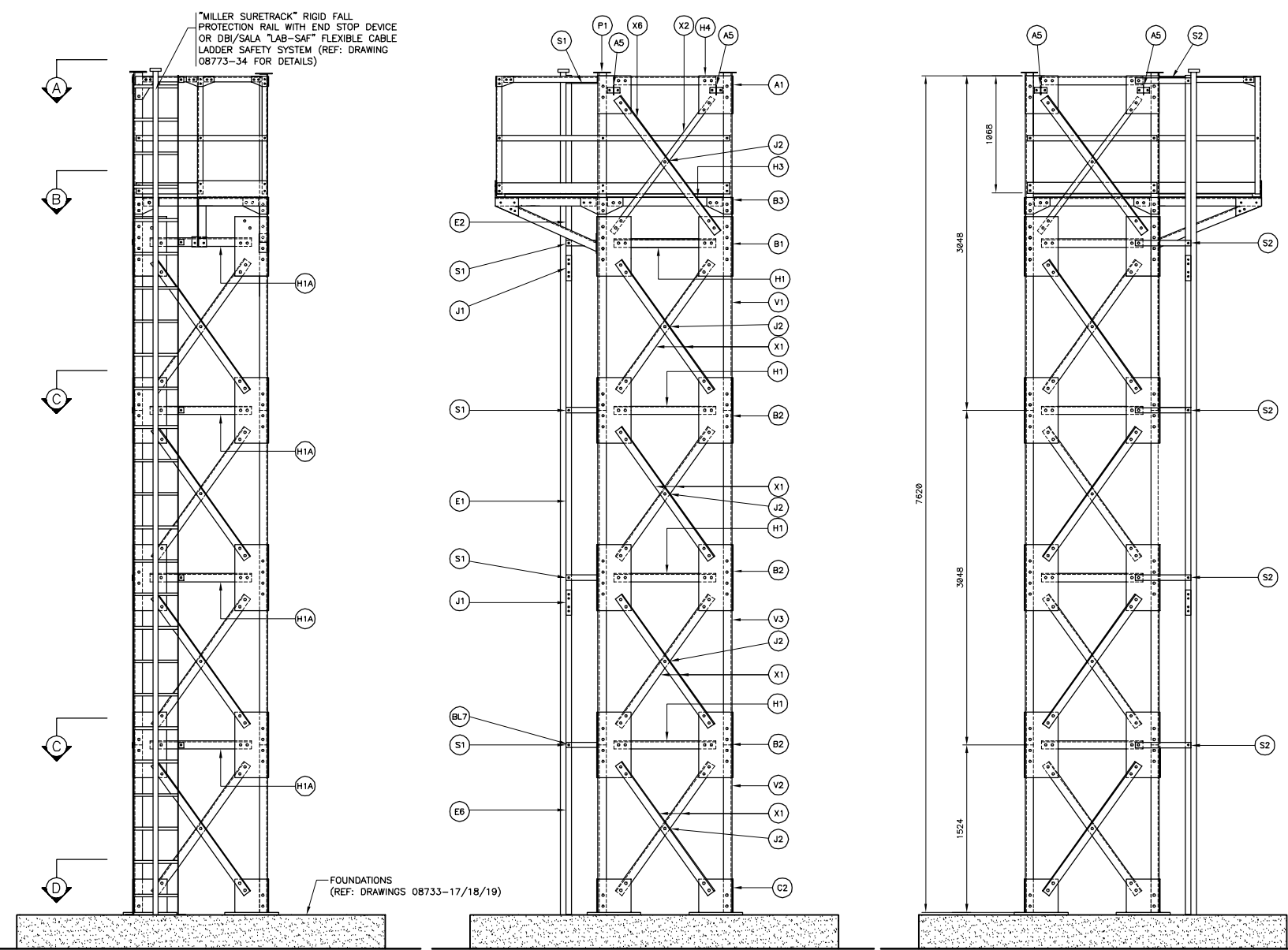
Toute modification doit être rapportée à:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 LATTICED STEEL TOWERS  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

7.6m TOWER (25ft)  
 ERECTING PLAN

Conçu par: Designed by:	P.-C. GAGNON, Ing.	Date 2003/05/30
Dessiné par: Drawn by:	ERIC GAGNON, tech.	Date 2003/05/30
Vérifié par: Verified by:	P.-C. GAGNON, Ing.	Date 2003/05/30
Approuvé par: Approved by:		Date

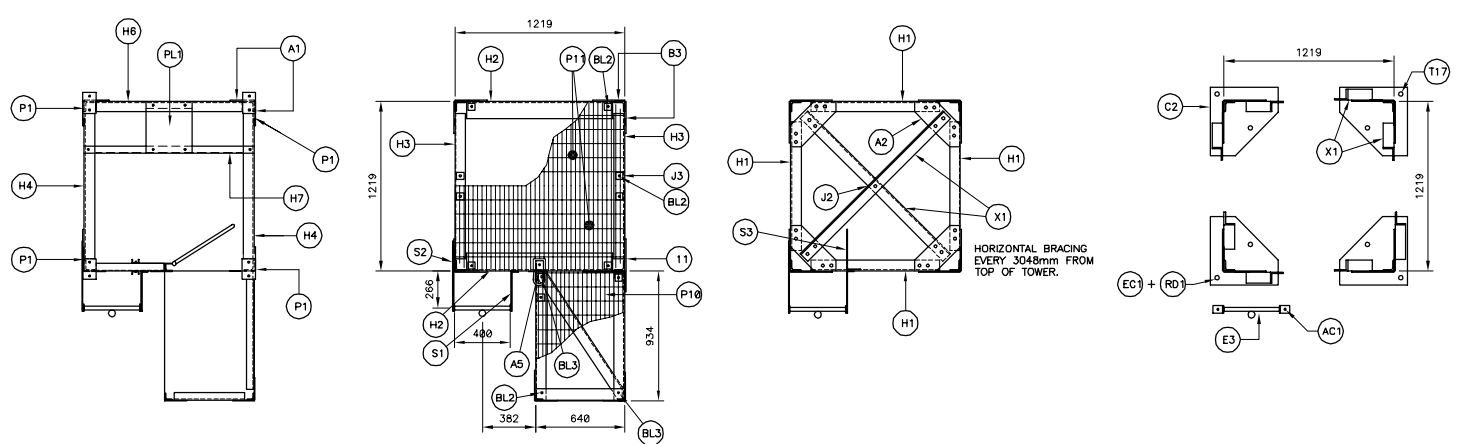
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No. dessin: Drawing no.:	08733	No. feuille: Sheet no.:	05



FRONT ELEVATION  
 SCALE 1:25

RIGHT ELEVATION  
 SCALE 1:25

LEFT ELEVATION  
 SCALE 1:25



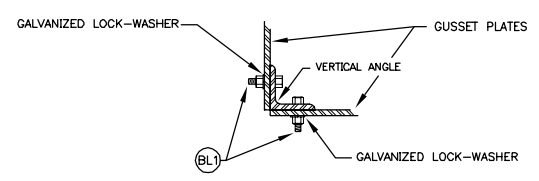
SECTION "A"  
 SCALE 1:25

SECTION "B"  
 SCALE 1:25

SECTION "C"  
 SCALE 1:25

SECTION "D"  
 SCALE 1:25

NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
 - "D-RING" ANCHORAGE CONNECTOR:  
 \*NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
 \*MAXIMUM CAPACITY = 140 kg.  
 \*MAXIMUM FREE FALL HEIGHT = 1.8m



BOLTING DETAIL (TYPE)  
 N.T.S.

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 Québec (Québec) G1K 7Y7

MATERIAL LIST

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3083	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	8	260.1
H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	15	124.9
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	5	41.6
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	16.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	16.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	9.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	44	574.2
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.7
X6	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-21	8	46.3
A2	PL 328 X 328 X 6.4	350 MPa	08733-21	8	46.9
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9.5	350 MPa	08733-21	8	96.3
B2	PL 300 X 600 X 9.5	350 MPa	08733-21	32	429.6
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	6	5.3
S2	FLAT BAR 51 X 6.4 X 508	350 MPa	08733-24	6	9.9
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	5	5.0
J1	FLAT BAR 50 X 6.4 X 229	350 MPa	08733-24	6	3.5
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	25	10.8
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BARS	08733-24	1	17.5
P11	GRATING 610 X 1219	W30-102/32x4.8 SERRATED BARS	08733-24	2	44.6
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	8	24.8
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C2	TOWER BASE	350 MPa	08733-21	4	179.5
E1	LADDER 3048	350 MPa	08733-24	2	63.5
E2	LADDER 1753	350 MPa	08733-24	1	16.7
E7	LADDER 1321	350 MPa	08733-24	1	13.6
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>2415.5</b>

NOTE:  
 THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8831 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	745	S/O
BL2	Ø13mm X 78mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	42	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	24	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	16	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, B165mm	ASTM-A325, HY-150 FROM HILTI	08733-24 (E3)	2	S/O

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6164 (MINIMUM APPLICATION RATE = 800g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

Revisión	Description	Par/By	Date
4	FALL ARRESTING DEVICE	P.-C.G.	04-11-23
3	FOR CONSTRUCTION	P.-C.G.	04-04-31
2	DEFINITIVE	P.-C.G.	04-01-08
1	DEFINITIVE	P.-C.G.	03-12-23

A: Numéro du détail / Detail no.  
 B: Feuille sur laquelle le détail est référencé / Location drawing no.  
 C: Feuille sur laquelle le détail est dessiné / Drawing no.

Toute modification doit être rapportée à: / All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier: / File:

LATTICED STEEL TOWERS  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin: / Drawing:

9.1m TOWER (30ft)  
 ERECTING PLAN

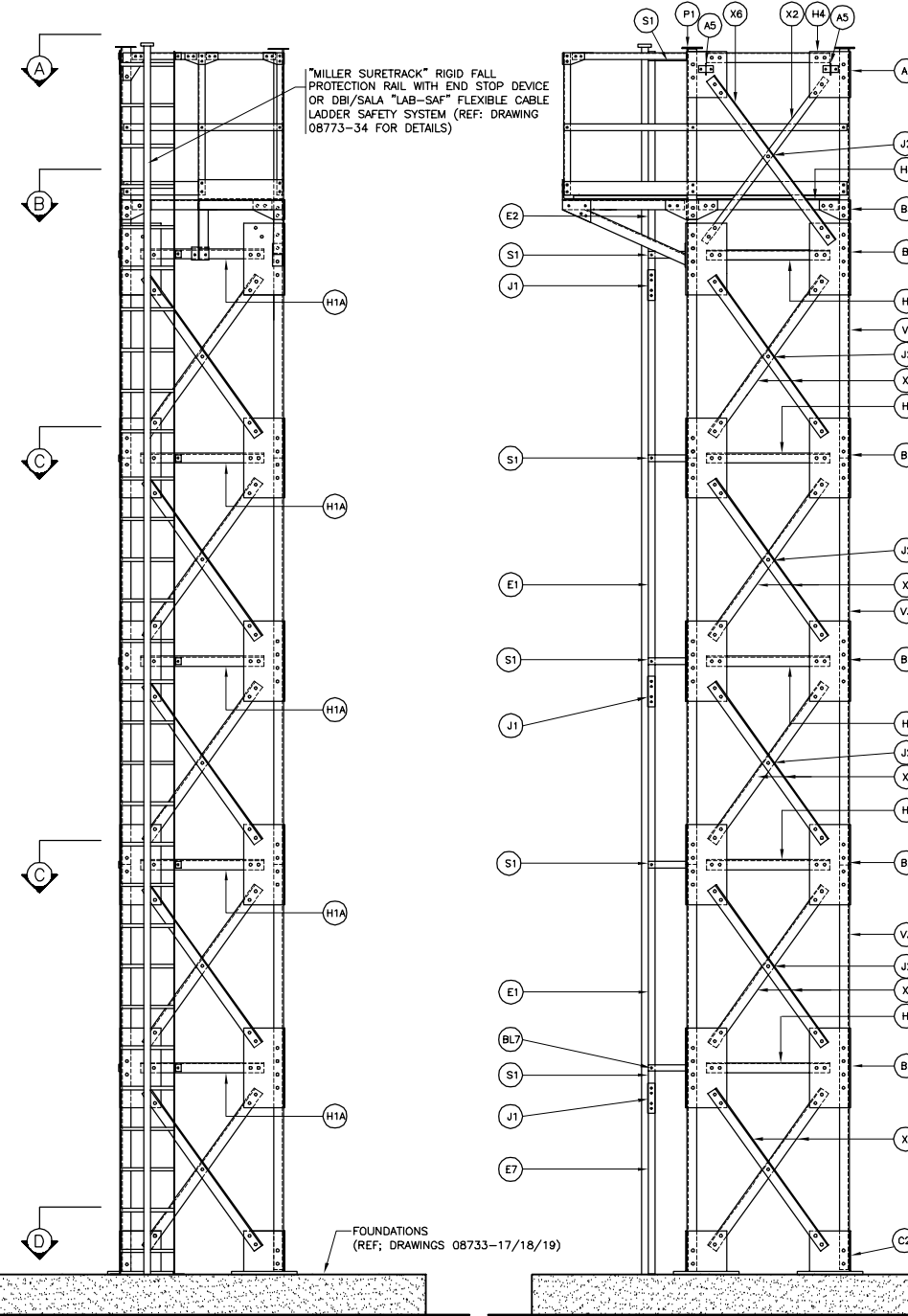
Conçu par: / Designed by: P.-C. GAGNON, Ing. 2003/05/30

Dessiné par: / Drawn by: ERIC GAGNON, tech. 2003/05/30

Vérifié par: / Verified by: P.-C. GAGNON, Ing. 2003/05/30

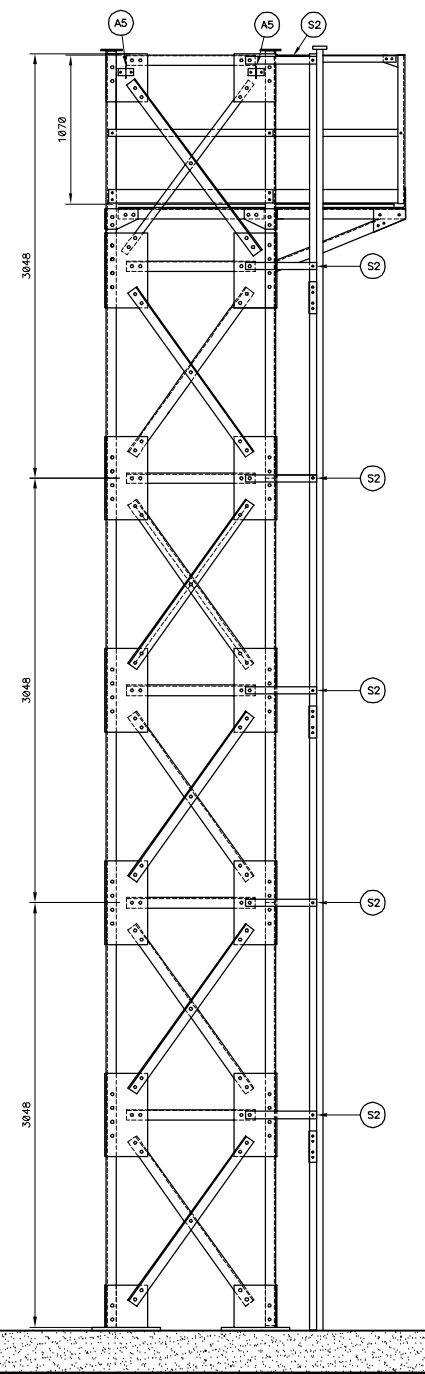
Approuvé par: / Approved by:

No. dossier: / No. drawing: 08733  
 Échelle: / Scale: INDICATED

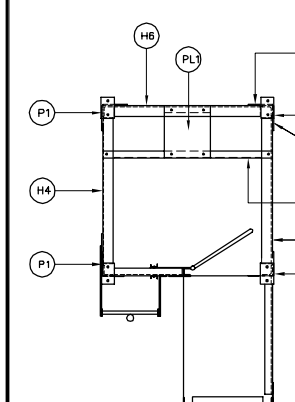


FRONT ELEVATION  
 SCALE 1:25

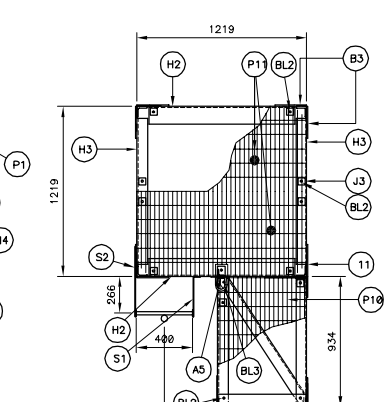
RIGHT ELEVATION  
 SCALE 1:25



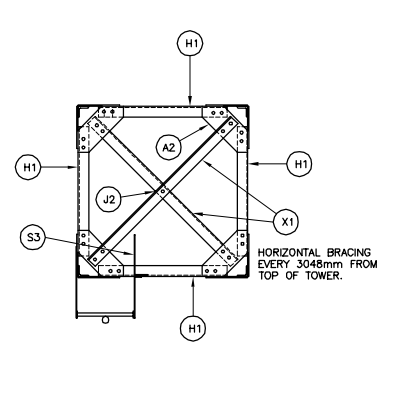
LEFT ELEVATION  
 SCALE 1:25



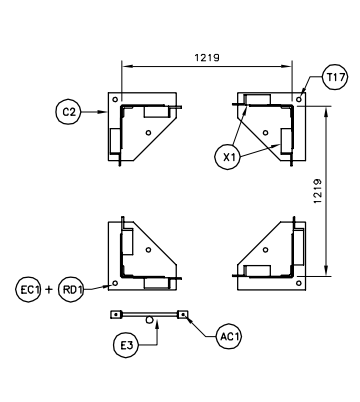
SECTION "A"  
 SCALE 1:25



SECTION "B"  
 SCALE 1:25

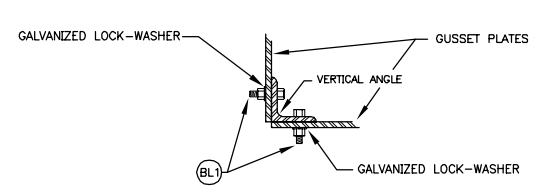


SECTION "C"  
 SCALE 1:25



SECTION "D"  
 SCALE 1:25

NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 181N  
 - "D-RING" ANCHORAGE CONNECTOR:  
 "NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME."  
 "MAXIMUM CAPACITY = 140 kg."  
 "MAXIMUM FREE FALL HEIGHT = 1.2m"



BOLTING DETAIL (TYPE)  
 N.T.S.

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 Québec (Québec) G1K 7Y7

**MATERIAL LIST**

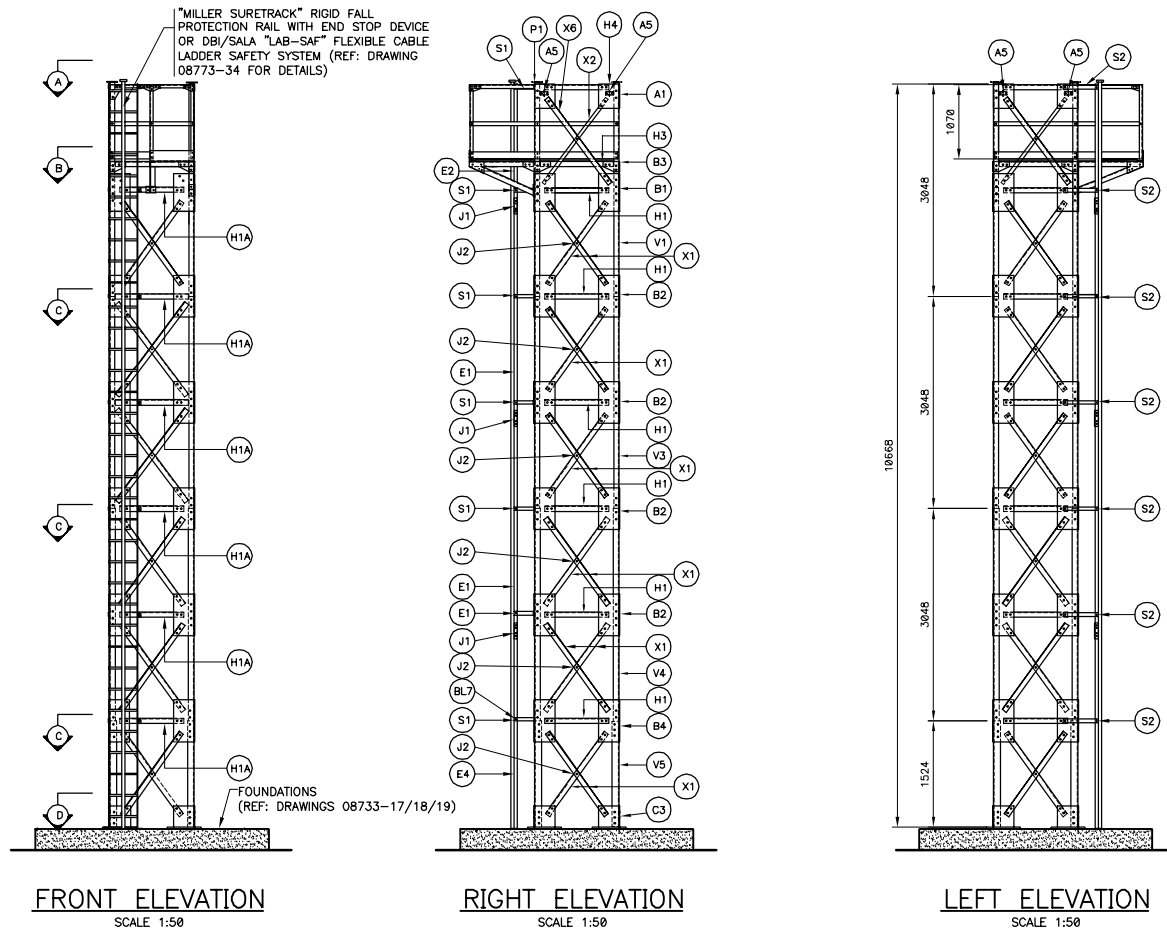
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	4	130.0
V4	L 89 X 89 X 9.5 X 3038	350 MPa	08733-23	4	153.1
V5	L 100 X 100 X 12.7 X 1514	350 MPa	08733-23	4	115.7
H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	18	149.9
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	6	50.0
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	8.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	54	704.7
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.7
X6	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-21	6	46.3
A2	PL 328 X 328 X 6.4	350 MPa	08733-21	12	70.4
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9.5	350 MPa	08733-21	6	96.3
B2	PL 300 X 600 X 9.5	350 MPa	08733-21	32	429.6
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
B4	PL 600 X 300 X 9.5	350 MPa	08733-21	8	107.4
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	7	6.2
S2	FLAT BAR 51 X 6.4 X 508	350 MPa	08733-24	7	9.1
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	6	5.9
J1	FLAT BAR 50 X 6.4 X 229	350 MPa	08733-24	6	3.5
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	30	12.9
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BARS	08733-24	1	17.5
P11	GRATING 610 X 1219	W30-102/32x4.8 SERRATED BARS	08733-24	2	44.6
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	18	49.6
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C3	TOWER BASE	350 MPa	08733-21	4	179.5
E1	LADDER 3048	350 MPa	08733-24	2	63.5
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E4	LADDER 2836	350 MPa	08733-24	1	29.4
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>2908.4</b>

NOTE:  
 THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8531 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

**BOLTS, NUTS AND WASHERS**

BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	886	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	45	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	32	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, #125mm	ASTM-A325, HY-150 FROM HILTI	08733-24 (E3)	2	S/O

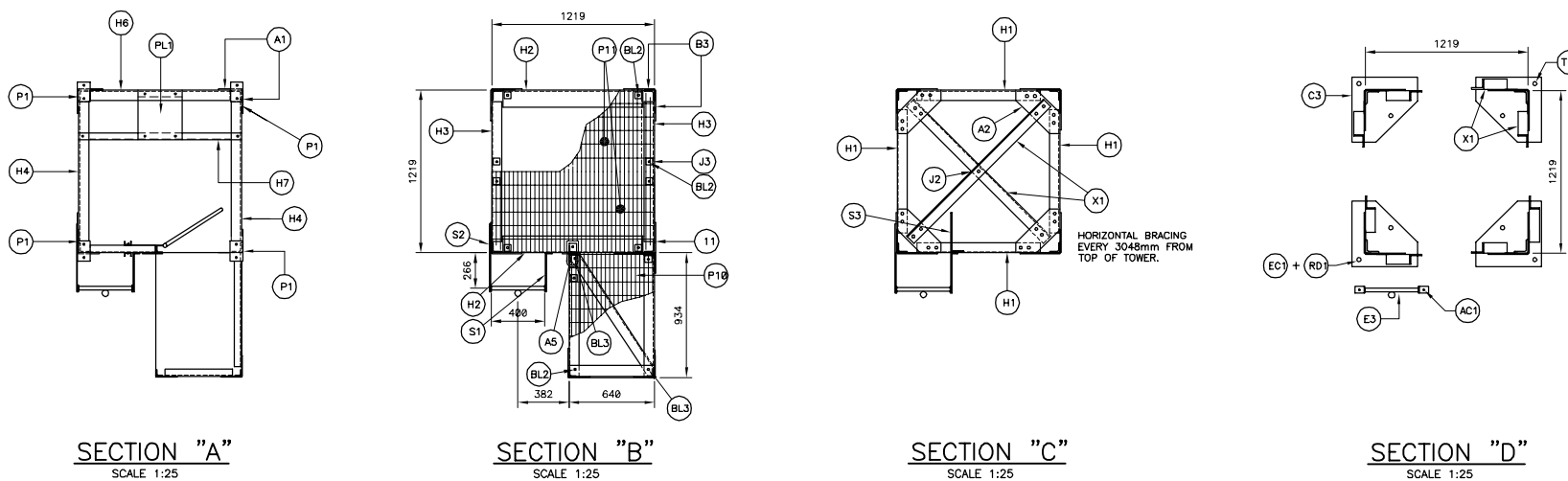
NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6164 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.



**FRONT ELEVATION**  
SCALE 1:50

**RIGHT ELEVATION**  
SCALE 1:50

**LEFT ELEVATION**  
SCALE 1:50



**SECTION "A"**  
SCALE 1:25

**SECTION "B"**  
SCALE 1:25

**SECTION "C"**  
SCALE 1:25

**SECTION "D"**  
SCALE 1:25

**BOLTING DETAIL (TYPE)**  
N.T.S.

NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 MN  
 - "D-RING" ANCHORAGE CONNECTOR:  
 \*NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
 \*MAXIMUM CAPACITY = 140 kg.  
 \*MAXIMUM FREE FALL HEIGHT = 1.8m

4	FALL ARRESTING DEVICE	P-C.G. 04-11-23
3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est révisé		
C	Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
 10.7m TOWER (35ft)  
 ERECTING PLAN

Conçu par:  
 Drawn by: **P.-C. GAGNON, Ing.** 2003/05/30  
 Date  
 Dessiné par:  
 Drawn by: **ERIC GAGNON, tech.** 2003/05/30  
 Date  
 Vérifié par:  
 Verified by: **P.-C. GAGNON, Ing.** 2003/05/30  
 Date

Approuvé par:  
 Approved by:  
 No. dossier:  
 File no.:  
 Échelle:  
 Scale:  
**INDICATED**  
 No. dessin:  
 Drawing no.: 08733  
 No. feuille:  
 Sheet no.: 07



Services techniques  
 Systèmes électroniques et Informatiques  
 Informations techniques et graphiques  
 101 Blvd. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7

MAATERIAL LIST

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	4	130.0
V4	L 89 X 89 X 9.5 X 3038	350 MPa	08733-23	4	153.1
V6	L 100 X 100 X 12.7 X 3038	350 MPa	08733-23	4	232.1
V7	L 127 X 127 X 15.9 X 1514	350 MPa	08733-23	4	179.9
H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	24	199.8
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	8	66.6
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	9.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	72	939.6
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.7
X6	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-22	6	46.3
A2	PL 328 X 328 X 6.4	350 MPa	08733-21	16	93.9
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9.5	350 MPa	08733-21	8	96.3
B2	PL 300 X 600 X 9.5	350 MPa	08733-21	32	429.6
B2A	PL 300 X 600 X 9.5	350 MPa	08733-21	8	107.4
B3	PL 229 X 150 X 6.4	350 MPa	08733-21	7	17.9
B4	PL 600 X 300 X 9.5	350 MPa	08733-21	8	107.4
B6	PL 600 X 300 X 9.5	350 MPa	08733-21	8	107.4
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	9	7.9
S2	FLAT BAR 51 X 6.4 X 508	350 MPa	08733-24	9	11.7
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	8	7.9
J1	FLAT BAR 50 X 6.4 X 229	350 MPa	08733-24	8	4.7
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	39	16.8
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BARS	08733-24	1	17.5
P11	GRATING 610 X 1219	W30-102/32x4.8 SERRATED BARS	08733-24	2	44.5
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	16	49.8
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C4	TOWER BASE	350 MPa	08733-21	4	179.5
E1	LADDER 3048	350 MPa	08733-24	3	95.3
E2	LADDER 1753	350 MPa	08733-24	1	16.7
E4	LADDER 2836	350 MPa	08733-24	1	29.4
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>3787.6</b>

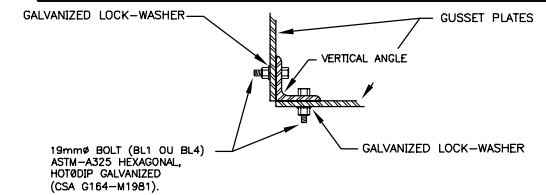
NOTE:  
 THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8831 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS

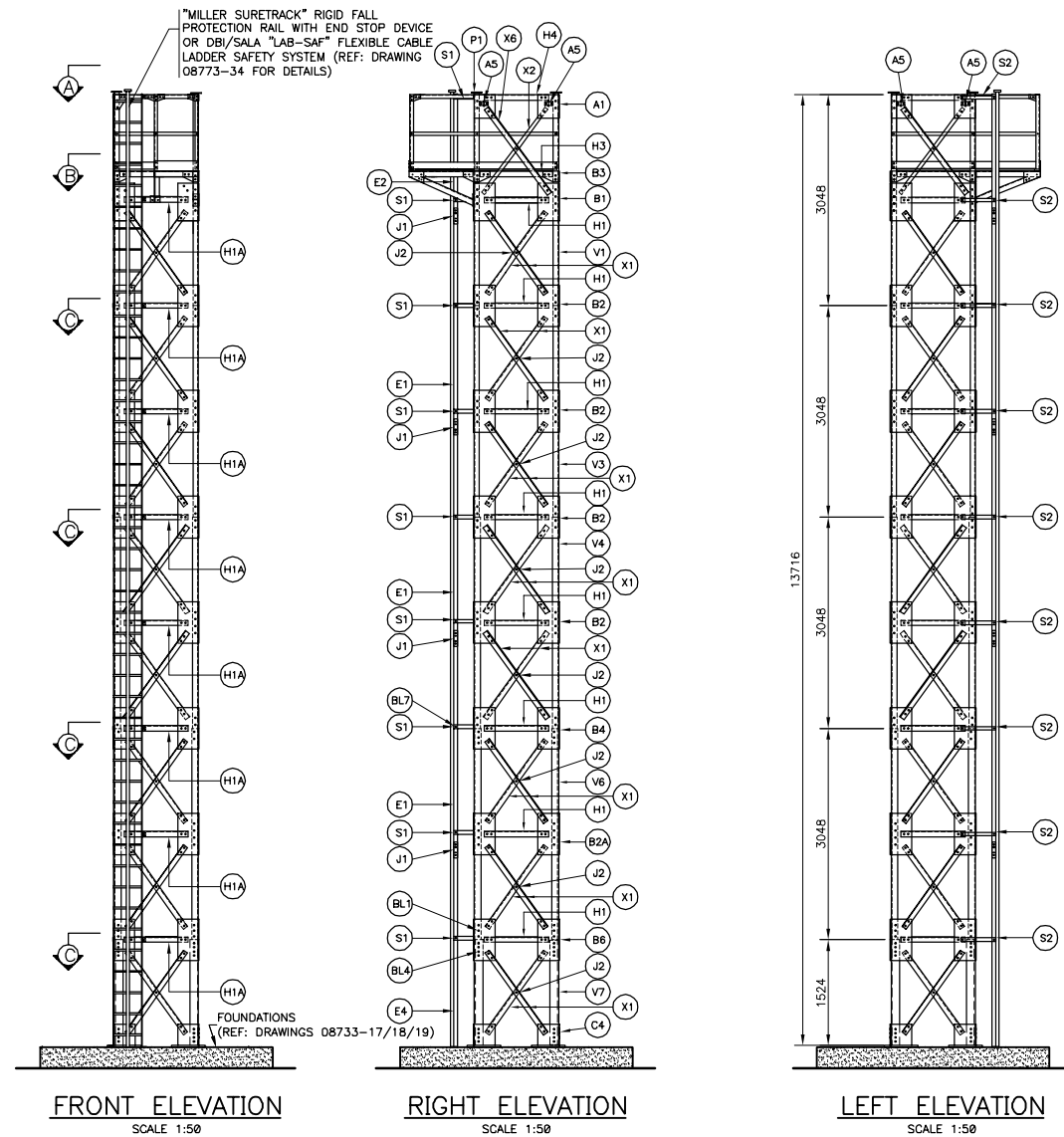
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1044	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	64	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	59	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	32	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, L165mm	ASTM-A325 HY-150 FROM HILTI	08733-24 (E3)	2	S/O

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6184 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
 - "D-RING" ANCHORAGE CONNECTOR:  
 \* NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
 \* MAXIMUM CAPACITY = 140 kg.  
 \* MAXIMUM FREE FALL HEIGHT = 1.8m



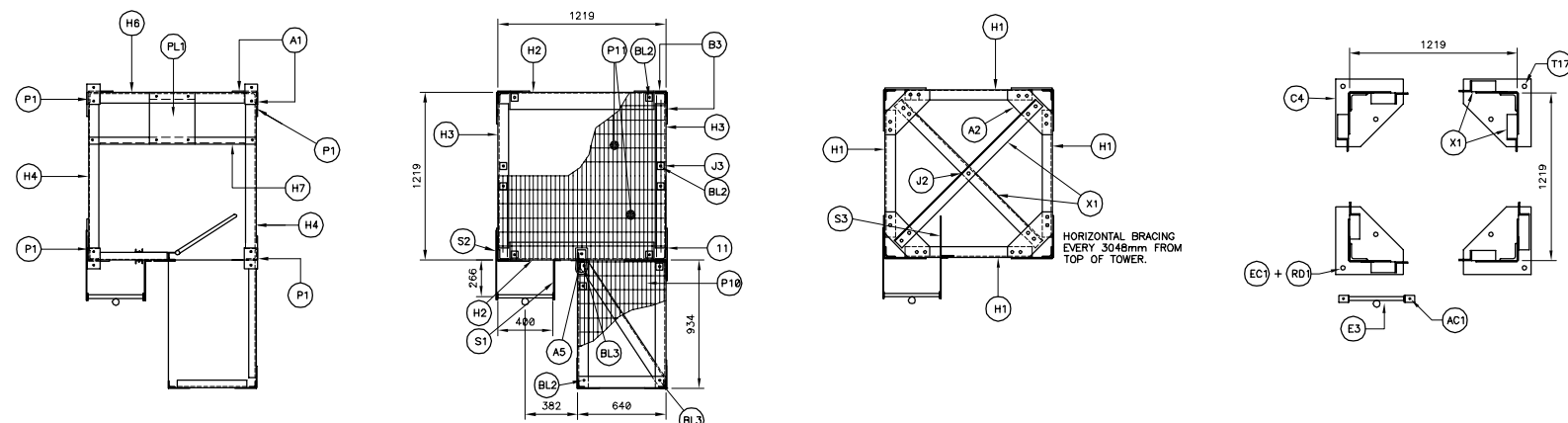
BOLTING DETAIL (TYPE)  
 N.T.S.



FRONT ELEVATION  
 SCALE 1:50

RIGHT ELEVATION  
 SCALE 1:50

LEFT ELEVATION  
 SCALE 1:50



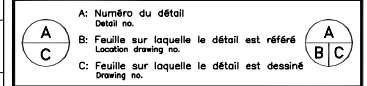
SECTION "A"  
 SCALE 1:25

SECTION "B"  
 SCALE 1:25

SECTION "C"  
 SCALE 1:25

SECTION "D"  
 SCALE 1:25

Revisión	Description	Par/By	Date
4	FALL ARRESTING DEVICE	P-C.G.	04-11-23
3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-23



Toute modification doit être rapportée à: / All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier: / File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24,4m (80ft)

Dessin: / Drawing:  
 13,7m TOWER (45ft)  
 ERECTING PLAN

Conçu par: / Designed by: **P-C.GAGNON, Ing.** 2003/05/30  
 Dessiné par: / Drawn by: **ERIC GAGNON, tech.** 2003/05/30  
 Vérifié par: / Verified by: **P-C.GAGNON, Ing.** 2003/05/30  
 Approuvé par: / Approved by:

No. dossier: / File no.:  
 No. dessin: / Drawing no.:  
 Échelle: / Scale:  
 No. feuille: / Sheet no.:  
**INDICATED**  
 08733 09

Services techniques  
Systèmes électroniques et Informatiques  
Informations techniques et graphiques  
101, Boul. Champlain (dépt 18)  
Québec (Québec) G1K 7Y7

**MATERIAL LIST**

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3,2	350 MPa	08733-21	1	3,1
V1	L 75 X 75 X 9,5 X 3063	350 MPa	08733-23	4	131,1
V3	L 75 X 75 X 9,5 X 3038	350 MPa	08733-23	4	130,0
V4	L 89 X 89 X 9,5 X 3038	350 MPa	08733-23	4	153,1
V6	L 100 X 100 X 12,7 X 3038	350 MPa	08733-23	4	232,1
V8	L 127 X 127 X 15,9 X 3038	350 MPa	08733-23	4	360,7
H1	L 75 X 75 X 7,9 X 925	350 MPa	08733-22	27	224,8
H1A	L 75 X 75 X 7,9 X 925	350 MPa	08733-22	9	74,9
H2	L 127 X 127 X 7,9 X 1047	350 MPa	08733-22	2	32,0
H3	L 75 X 75 X 7,9 X 1047	350 MPa	08733-22	2	18,8
H4	L 75 X 75 X 7,9 X 1047	350 MPa	08733-22	2	18,8
H6	L 75 X 75 X 7,9 X 1047	350 MPa	08733-22	1	9,4
H7	L 51 X 51 X 6,4 X 1219	350 MPa	08733-22	1	5,8
X1	L 75X 75 X 7,9 X 1450	350 MPa	08733-22	80	1044,0
X2	FLAT BAR 50 X 6,4 X 1527	350 MPa	08733-22	3	11,7
X6	L 75 X 75 X 7,9 X 1527lg	350 MPa	08733-22	3	41,2
A1	PL 345 X 300 X 9,5	350 MPa	08733-21	6	45,3
A2	PL 328 X 328 X 6,4	350 MPa	08733-21	16	93,9
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL 82101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9,5	350 MPa	08733-21	8	96,3
B2	PL 300 X 600 X 9,5	350 MPa	08733-21	32	429,6
B2A	PL 300 X 600 X 9,5	350 MPa	08733-21	16	214,8
B3	PL 229 X 150 X 9,5	350 MPa	08733-21	7	17,9
B4	PL 600 X 300 X 9,5	350 MPa	08733-21	8	107,4
B6	PL 600 X 300 X 9,5	350 MPa	08733-21	8	107,4
S1	FLAT BAR 51 X 6,4 X 342	350 MPa	08733-24	9	7,9
S2	FLAT BAR 51 X 6,4 X 508	350 MPa	08733-24	9	11,7
S3	FLAT BAR 51 X 6,4 X 387	350 MPa	08733-24	9	8,9
J1	FLAT BAR 50 X 6,4 X 229	350 MPa	08733-24	10	5,9
J2	SPACER PL 75 X 75 X 9,5	350 MPa	08733-24	43	18,5
J3	SPACER PL 51 X 51 X 7,9	350 MPa	08733-24	12	1,9
P10	GRATING 916 X 940	W30-102/32x4,8 SERRATED BARS	08733-24	1	17,5
P11	GRATING 610 X 1219	W30-102/32x4,8 SERRATED BARS	08733-24	2	44,5
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	16	49,6
P1	PL 92 X 152 X 6,4	350 MPa	08733-21	4	2,8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	127,2
C4	TOWER BASE	350 MPa	08733-21	4	179,6
E1	LADDER 3048	350 MPa	08733-24	4	127,1
E2	LADDER 1753	350 MPa	08733-24	1	18,7
E5	LADDER 1295	350 MPa	08733-24	1	13,5
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>4220,0</b>

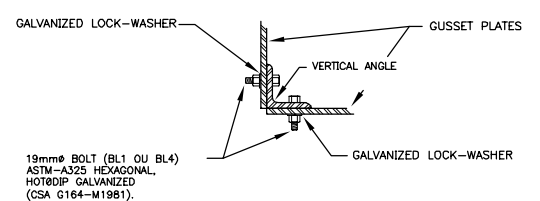
NOTE:  
THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SURE TRACK" TYPE, MODEL 8631 OR EQUIVALENT TO BE APPROVED BY CGG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

**BOLTS, NUTS AND WASHERS**

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1100	S/O
BL2	Ø13mm X 75mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	96	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	70	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	32	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, L=155mm	ASTM-A325, HY-150 FROM MILL II	08733-24 (E3)	2	S/O

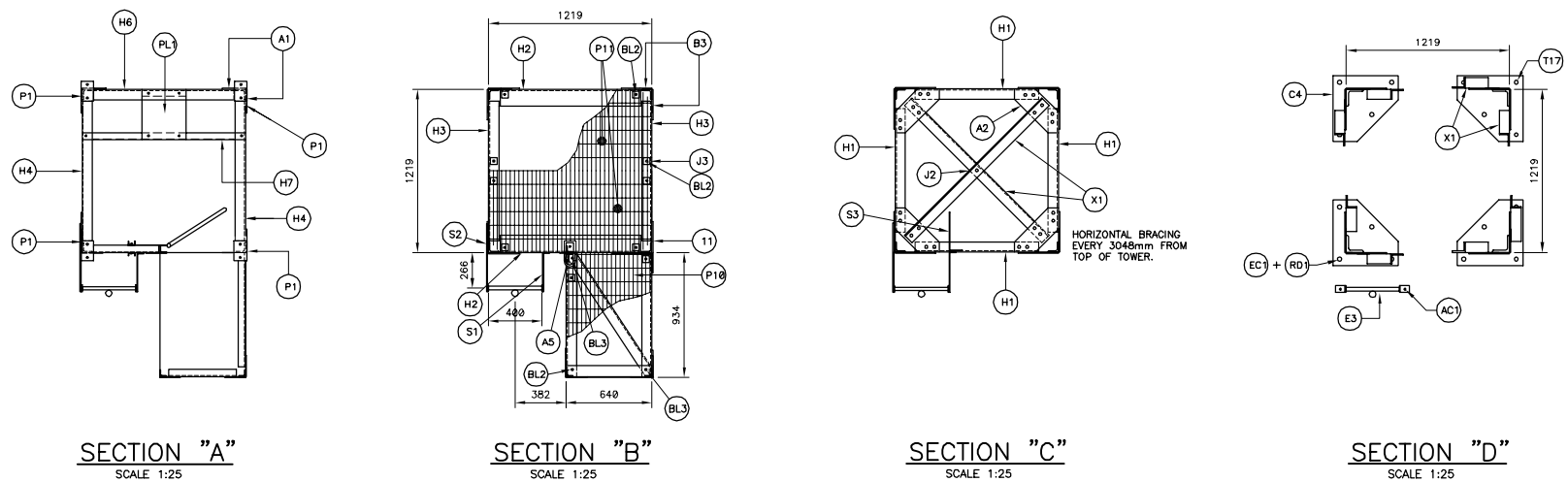
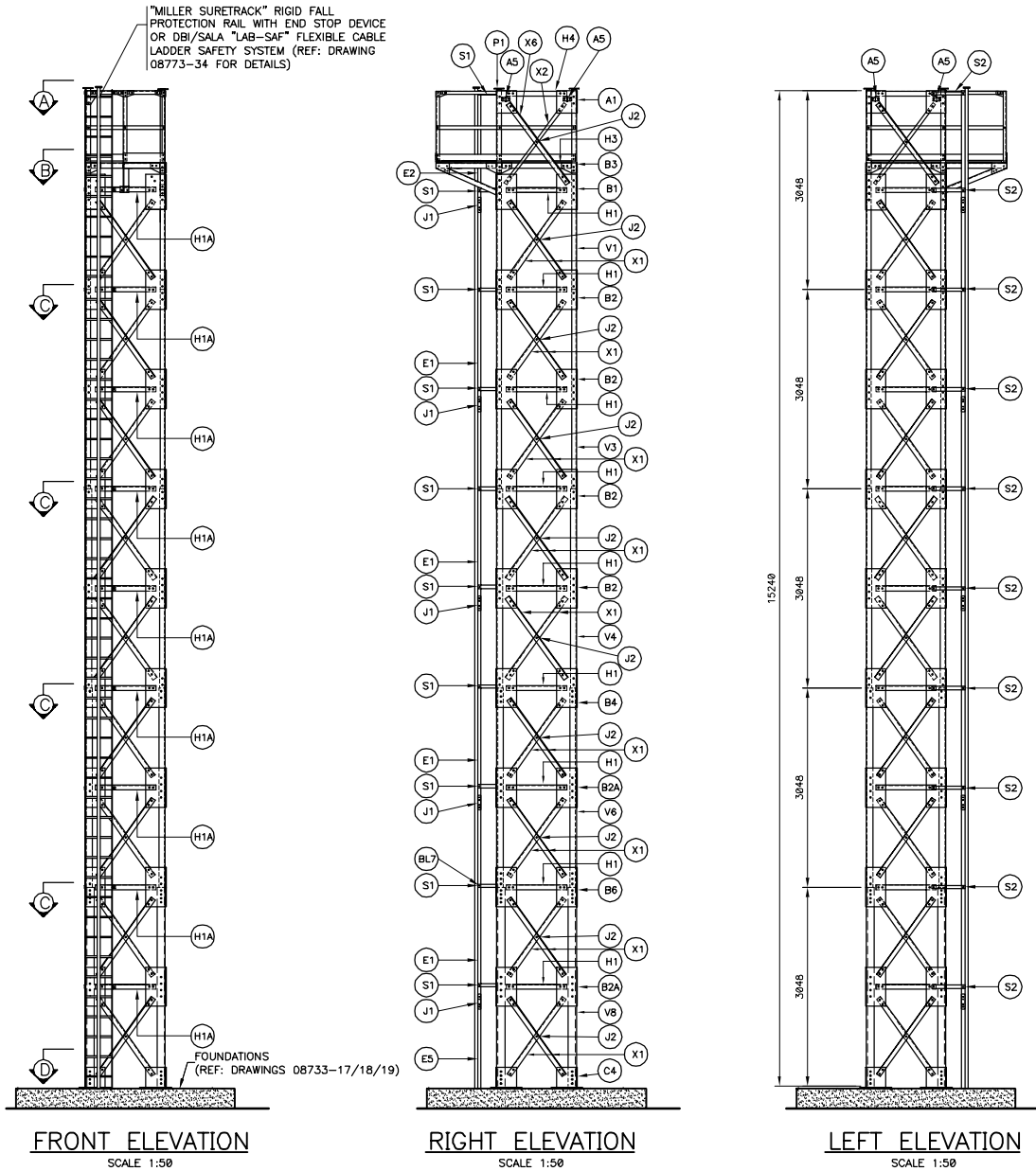
NOTES:  
- ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CAN/CSA-G154 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
- BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

NOTES:  
- CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
- "D-RING" ANCHORAGE CONNECTOR:  
\*NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
\*MAXIMUM CAPACITY = 140 kg  
\*MAXIMUM FREE FALL HEIGHT = 1,8m

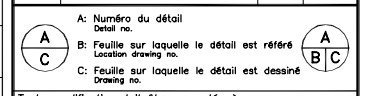


**BOLTING DETAIL (TYPE)**

N.T.S.



Revisión	Description	Par/By	Date
4	FALL ARRESTING DEVICE	P-C.G.	04-11-23
3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITE	P-C.G.	04-01-08
1	DEFINITE	P-C.G.	03-12-23



Toute modification doit être rapportée à:  
All modification must be reported to:  
**GARDE CÔTIÈRE, RÉGION LAURENTIENNE**  
SERVICES TECHNIQUES  
Systèmes électroniques et Informatiques  
Informations Techniques et Graphiques

Dossier:  
Nom:  
**LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
Drawing:  
15.2m TOWER (50ft)  
ERECTING PLAN

Conçu par / Designed by	Date
<b>P-C.GAGNON, Ing.</b>	<b>2003/05/30</b>
Dessiné par / Drawn by	Date
<b>ÉRIC GAGNON, tech.</b>	<b>2003/05/30</b>
Vérifié par / Verified by	Date
<b>P-C.GAGNON, Ing.</b>	<b>2003/05/30</b>
Approuvé par / Approved by	Date

No. dossier / File no.	Échelle / Scale
	<b>INDICATED</b>
No. dessin / Drawing no.	No. feuille / Sheet no.
08733	10

Services techniques  
Systèmes électroniques et informatiques  
Informations techniques et graphiques  
101 Boul. Champlain (dépt 18)  
Québec (Québec) G1K 7Y7

MATERIAL LIST

Table with columns: CODE, DESCRIPTION, GRADE, REFERENCE DRAWING, QUANTITY, WEIGHT (kg). Lists materials like PL 375 X 330 X 3.2, L 76 X 76 X 9.5 X 3063, etc.

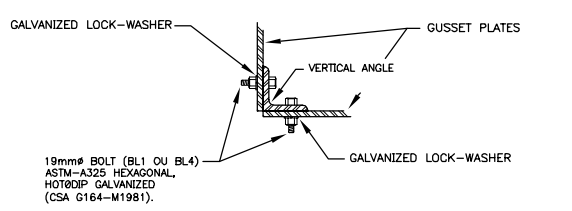
NOTE: THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE... NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS

Table with columns: CODE, DESCRIPTION, GRADE, REFERENCE DRAWING, QUANTITY, WEIGHT (kg). Lists bolts like BL1, BL2, BL3, etc.

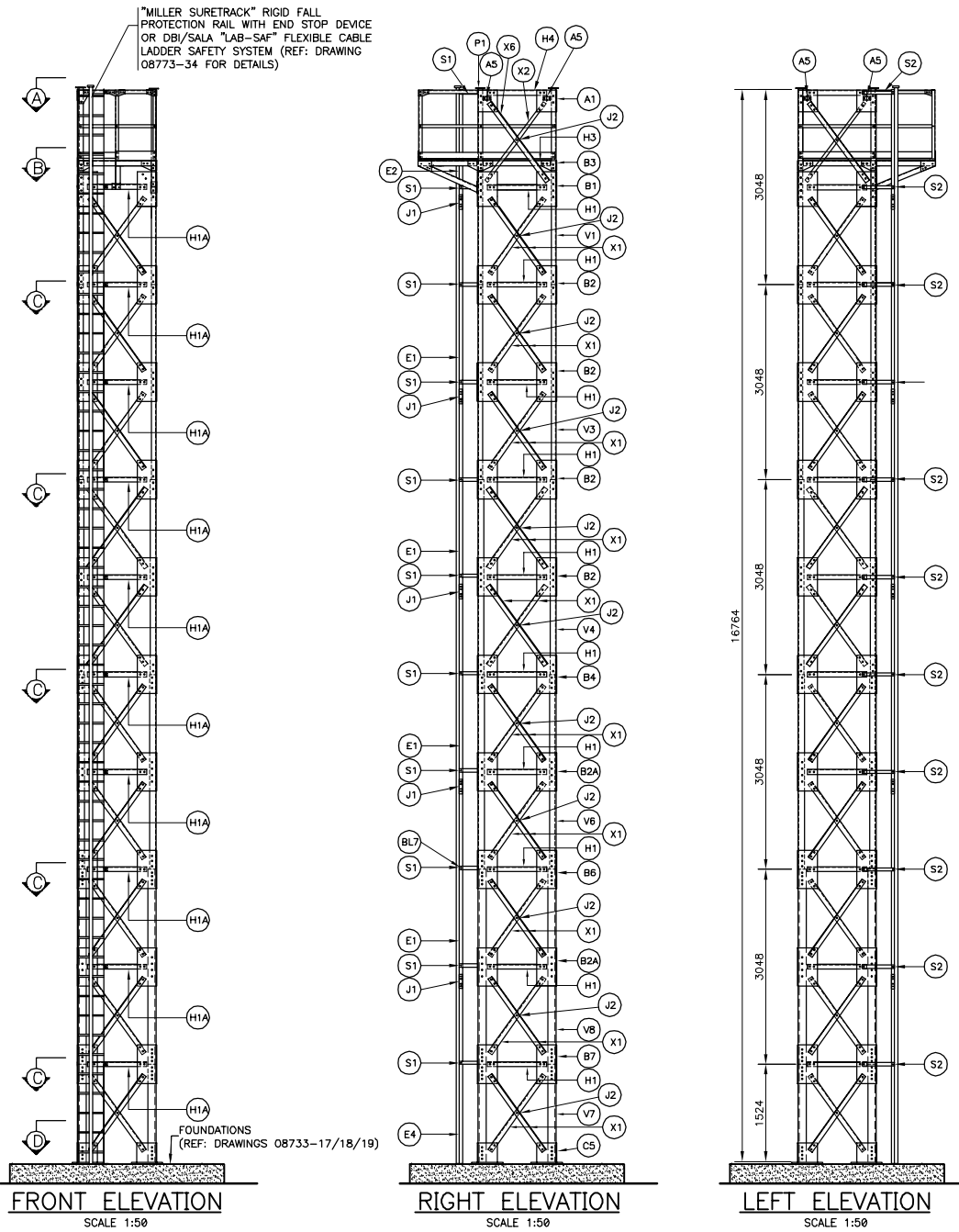
NOTES: - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED... - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

NOTES: - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN... - "D-RING" ANCHORAGE CONNECTOR: \*NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.



BOLTING DETAIL (TYPE)

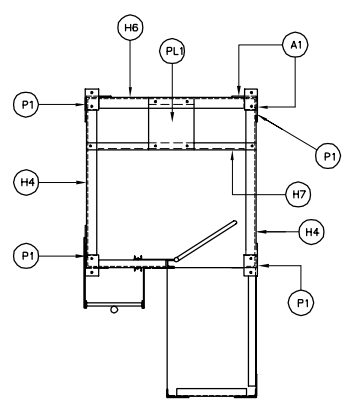
N.T.S.



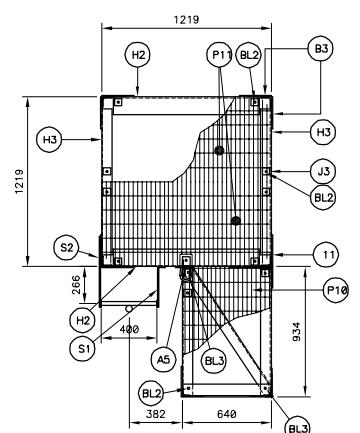
FRONT ELEVATION SCALE 1:50

RIGHT ELEVATION SCALE 1:50

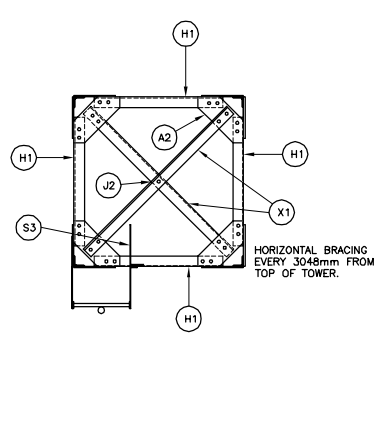
LEFT ELEVATION SCALE 1:50



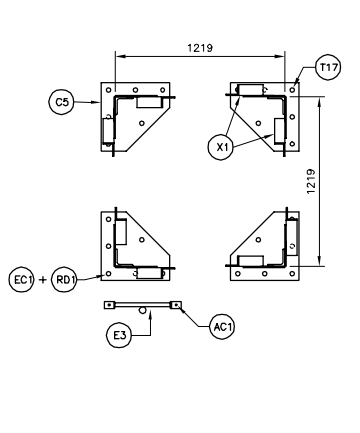
SECTION "A" SCALE 1:25



SECTION "B" SCALE 1:25

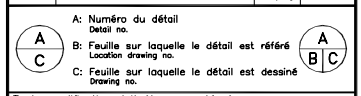


SECTION "C" SCALE 1:25



SECTION "D" SCALE 1:25

Revision table with columns: #, Description, Date. Includes entries for Fall Arresting Device, For Construction, and Definitive.



Toute modification doit être rapportée à: GARDE CÔTIÈRE, RÉGION LAURENTIENNE SERVICES TECHNIQUES

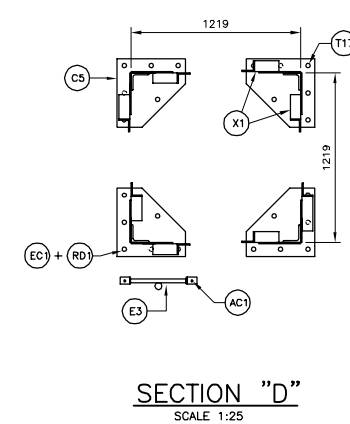
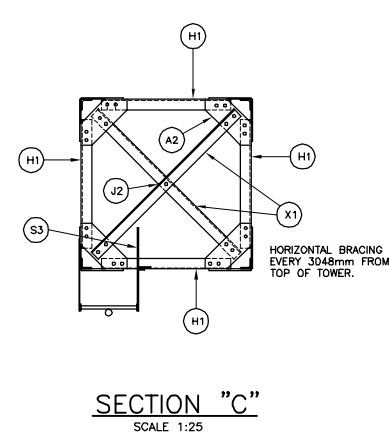
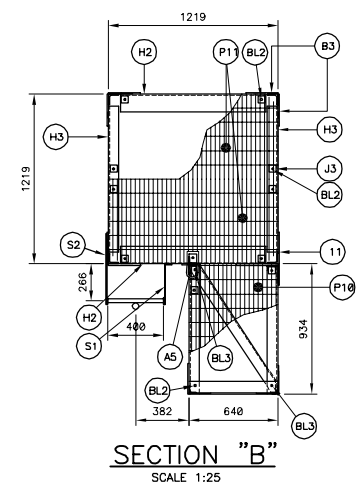
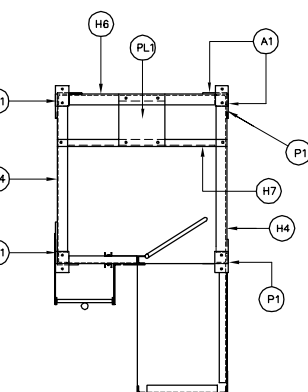
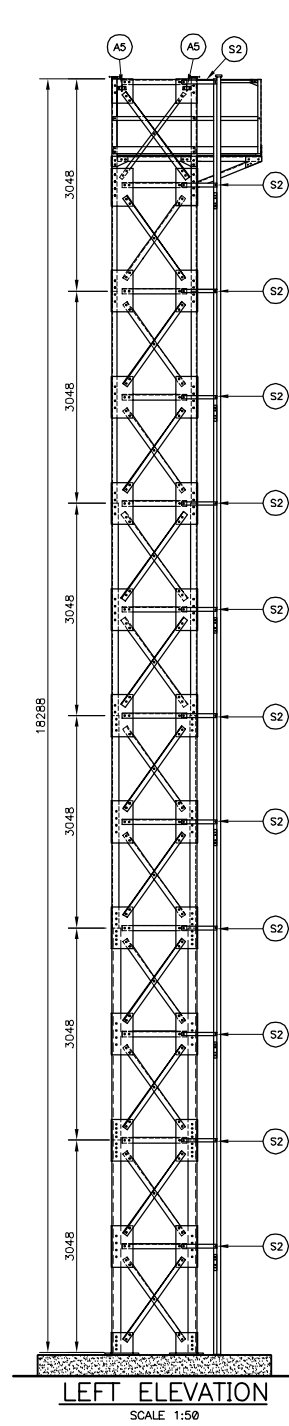
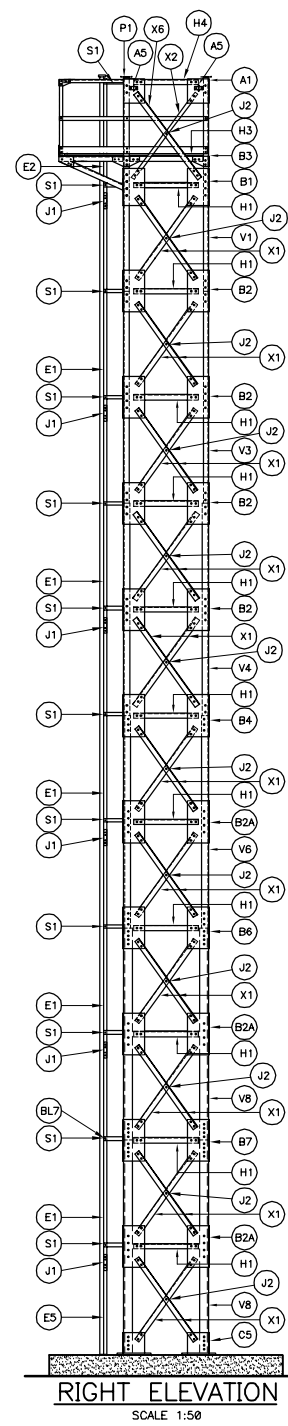
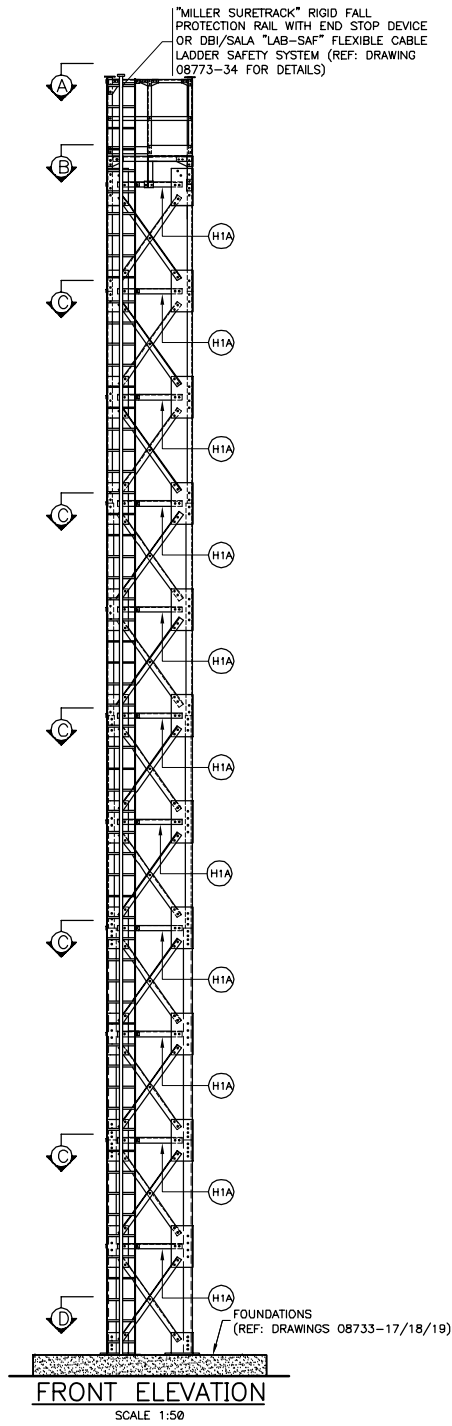
LATTICED STEEL TOWERS HEIGHT 3m (10ft) @ 24,4m (80ft)

16.8m TOWER (55ft) ERECTING PLAN

Conçu par: P-C.GAGNON, Ing. 2005/05/30  
Dessiné par: ERIC GAGNON, tech. 2005/05/30  
Vérifié par: P-C.G., Ing. 2005/05/30

No. dossier: 08733  
No. feuille: 11

"MILLER SURETRACK" RIGID FALL PROTECTION RAIL WITH END STOP DEVICE OR DBI/SALA "LAB-SAF" FLEXIBLE CABLE LADDER SAFETY SYSTEM (REF: DRAWING 08773-34 FOR DETAILS)



MATERIAL LIST

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	4	130.0
V4	L 89 X 89 X 9.5 X 3038	350 MPa	08733-23	4	153.1
V6	L 100 X 100 X 12.7 X 3038	350 MPa	08733-23	4	232.1
V8	L 127 X 127 X 15.9 X 3038	350 MPa	08733-23	8	721.8
H1	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	33	274.7
H1A	L 76 X 76 X 7.9 X 925	350 MPa	08733-22	11	91.8
H2	L 127 X 127 X 7.9 X 1047	350 MPa	08733-22	2	32.0
H3	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H4	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	2	18.8
H6	L 76 X 76 X 7.9 X 1047	350 MPa	08733-22	1	9.4
H7	L 51 X 51 X 6.4 X 1219	350 MPa	08733-22	1	5.8
X1	L 76 X 76 X 7.9 X 1450	350 MPa	08733-22	98	1278.9
X2	FLAT BAR 50 X 6.4 X 1527	350 MPa	08733-22	3	11.5
X6	L 76 X 76 X 7.9 X 1527	350 MPa	08733-22	3	41.2
A1	PL 345 X 300 X 9.5	350 MPa	08733-21	6	46.3
A2	PL 328 X 328 X 6.4	350 MPa	08733-21	20	117.3
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B1	PL 300 X 538 X 9.5	350 MPa	08733-21	8	96.3
B2	PL 300 X 600 X 9.5	350 MPa	08733-21	32	429.5
B2A	PL 300 X 600 X 9.5	350 MPa	08733-21	24	322.2
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
B4	PL 600 X 300 X 9.5	350 MPa	08733-21	8	107.4
B6	PL 600 X 300 X 9.5	350 MPa	08733-21	8	107.4
B7	PL 600 X 300 X 9.5	350 MPa	08733-21	8	107.4
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	12	10.5
S2	FLAT BAR 51 X 6.4 X 506	350 MPa	08733-24	12	15.8
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	11	10.9
J1	FLAT BAR 50 X 6.4 X 229	350 MPa	08733-24	12	7.0
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	52	22.4
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W102-30/32x4.8 SERRATED BARS	08733-24	1	17.5
P11	GRATING 610 X 1219	W102-30/32x4.8 SERRATED BARS	08733-24	2	44.5
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	24	74.4
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	119.8
C5	TOWER BASE	350 MPa	08733-21	4	179.5
E1	LADDER 3048	350 MPa	08733-24	5	158.9
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E5	LADDER 1296	350 MPa	08733-24	1	13.5
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>5190.9</b>

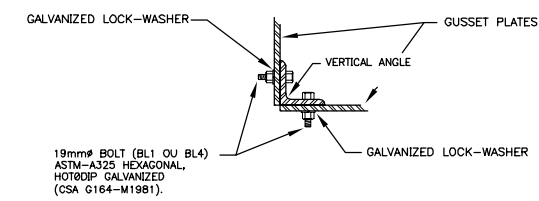
NOTE:  
THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8631 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS

BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1346	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	192	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	84	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	72	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, H165mm	ASTM-A325 HY-150 FROM HILTI	08733-24 (E3)	2	S/O

NOTES:  
- ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6184 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
- BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

NOTES:  
- CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
- "D-RING" ANCHORAGE CONNECTOR:  
\*NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
\*MAXIMUM CAPACITY = 140 kg.  
\*MAXIMUM FREE FALL HEIGHT = 1.8m



Services techniques / Systèmes électroniques et informatiques / Informations techniques et graphiques  
101 Boul. Champlain (dépot 18) / Québec (Québec) G1K 7Y7

4	FALL ARRESTING DEVICE	P-C.G. 04-11-23
3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	A: Numéro du détail / Detail no.		
B	B: Feuille sur laquelle le détail est référencé / Location drawing no.		
C	C: Feuille sur laquelle le détail est dessiné / Drawing no.		

Toute modification doit être rapportée à: / All modification must be reported to:  
GARDE CÔTIÈRE, RÉGION LAURENTIENNE / SERVICES TECHNIQUES / Systèmes électroniques et informatiques / Informations Techniques et Graphiques

Dossier: / File:  
**LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin: / Drawing:  
**18.3m TOWER (60ft) / ERECTING PLAN**

Conçu par: / Designed by:	<b>P-C.GAGNON, Ing.</b>	Date / Date:	<b>2003/05/30</b>
Dessiné par: / Drawn by:	<b>ERIC GAGNON, tech.</b>	Date / Date:	<b>2003/05/30</b>
Vérifié par: / Verified by:	<b>P-C.GAGNON, Ing.</b>	Date / Date:	<b>2003/05/30</b>

No. dossier: / File no.:		Échelle: / Scale:	<b>INDICATED</b>
No. dessin: / Drawing no.:		No. feuille: / Sheet no.:	<b>12</b>



Services techniques  
 Systèmes électroniques et Informatiques  
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 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7

**MATERIAL LIST**

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	8	260.0
V6	L 102 X 102 X 13 X 3038	350 MPa	08733-23	8	464.2
V9	L 127 X 127 X 16 X 3038	350 MPa	08733-23	4	360.9
V10	L 127 X 127 X 16 X 1514	350 MPa	08733-23	4	179.9
H8	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	36	388.8
H8A	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	12	129.6
H9	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	2	23.8
H10	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	1	11.9
H11	L 51 X 51 X 6.4 X 1524	350 MPa	08733-22	1	13.7
H12	L 76 X 76 X 7.9 X 1352	350 MPa	08733-22	2	24.3
H13	L 127 X 127 X 7.9 X 1352	350 MPa	08733-22	2	41.4
X3	L 76 X 76 X 7.9 X 1677	350 MPa	08733-22	96	1448.9
X4	L 76 X 76 X 7.9 X 1884	350 MPa	08733-22	12	199.4
X5	FLAT BAR 50 X 6.4 X 1751	350 MPa	08733-22	3	13.5
X7	L 76 X 76 X 7.9 X 1743	350 MPa	08733-22	3	47.1
A3	PL 313 X 312 X 9.5	350 MPa	08733-21	6	43.7
A4	PL 328 X 328 X 6.4	350 MPa	08733-21	24	140.8
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	5	-
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
B5	PL 313 X 600 X 9.5	350 MPa	08733-21	32	429.6
B8	PL 313 X 534 X 9.5	350 MPa	08733-21	8	99.7
B9	PL 313 X 534 X 9.5	350 MPa	08733-21	24	299.2
B10	PL 313 X 534 X 9.5	350 MPa	08733-21	8	99.7
B11	PL 313 X 597 X 9.5	350 MPa	08733-21	8	111.5
B12	PL 313 X 660 X 9.5	350 MPa	08733-21	8	123.2
B15	PL 313 X 494 X 9.5	350 MPa	08733-21	8	91.7
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	28	22.8
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	12	11.9
J1	FLAT BAR 51 X 6.4 X 229	350 MPa	08733-24	12	7.0
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	57	24.5
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BARS	08733-24	1	17.5
P12	GRATING 762 X 1524	W30-102/32x4.8 SERRATED BARS	08733-24	2	69.7
T17	ANCHOR BOLTS 256	ASTM-A325M	08733-21	24	74.4
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G2	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	128.3
C6	TOWER BASE	350 MPa	08733-21	4	187.1
E1	LADDER 3046	350 MPa	08733-24	5	158.9
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E4	LADDER 2836	350 MPa	08733-24	1	29.4
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
<b>TOTAL</b>				<b>5928.4</b>	

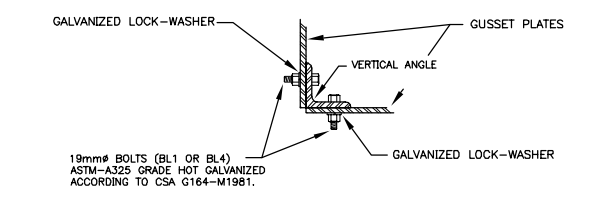
NOTE:  
 THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8631 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

**BOLTS, NUTS AND WASHERS**

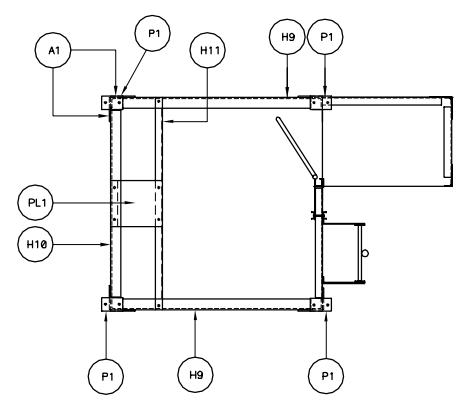
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1186	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	352	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	100	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	72	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, L=165mm	ASTM-A325, HY-150 FROM HILT	08733-24 (E4)	2	S/O

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6164 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

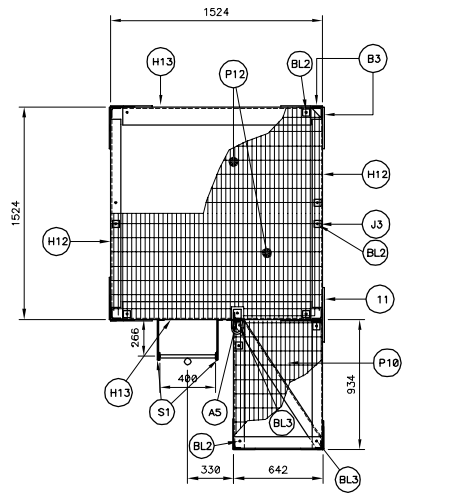
NOTES:  
 - CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
 - "D-RING" ANCHORAGE CONNECTOR:  
 \* NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
 \* MAXIMUM CAPACITY = 140 kg.  
 \* MAXIMUM FREE FALL HEIGHT = 1.8m



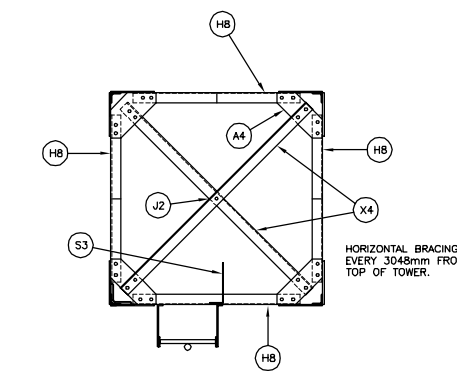
**BOLTING DETAIL (TYPE)**  
 N.T.S.



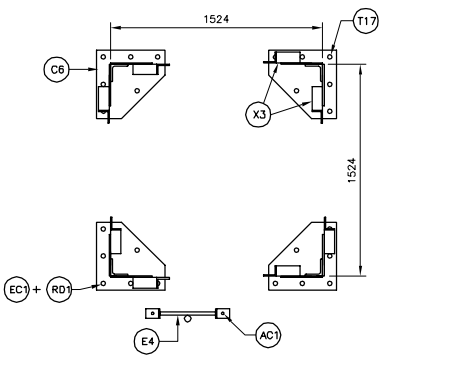
**SECTION "A"**  
 SCALE 1:25



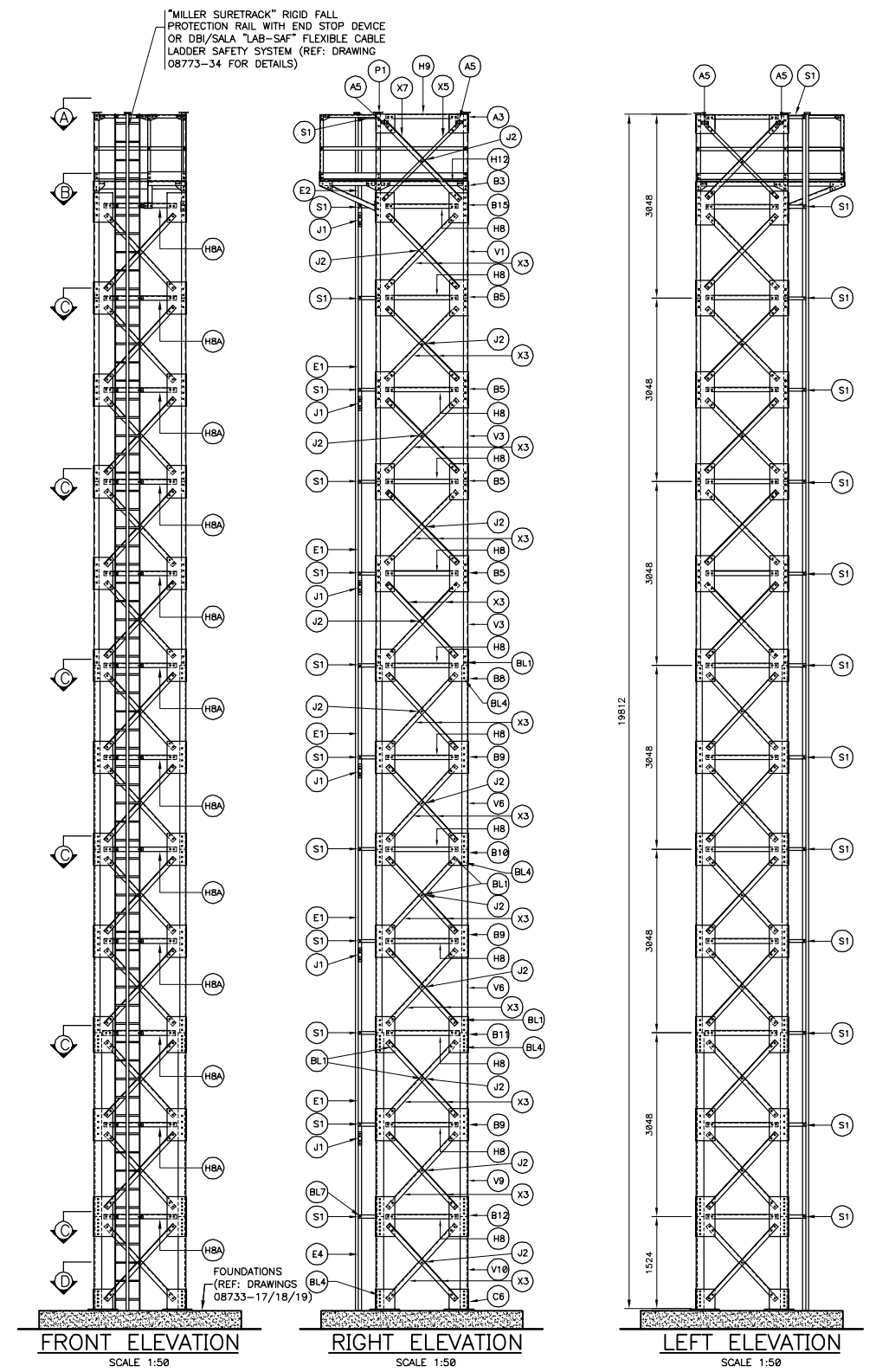
**SECTION "B"**  
 SCALE 1:25



**SECTION "C"**  
 SCALE 1:25



**SECTION "D"**  
 SCALE 1:25



**FRONT ELEVATION**  
 SCALE 1:50

**RIGHT ELEVATION**  
 SCALE 1:50

**LEFT ELEVATION**  
 SCALE 1:50

Revisión	Description	Par/By	Date
4	PLATE B5 AND B15 REISED	L.T.A.	05-04-08
3	FALL ARRESTING DEVICE	P-C.G.	04-11-23
2	FOR CONSTRUCTION	P-C.G.	04-05-31
1	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-23

A: Numéro du détail  
 B: Feuille sur laquelle le détail est référencé  
 C: Feuille sur laquelle le détail est dessiné

Toute modification doit être rapportée à:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

19.8m TOWER (65ft)  
 ERECTING PLAN

Conçu par: Designed by:	<b>P-C.GAGNON, Ing.</b>	Date 2003/05/30
Dessiné par: Drawn by:	<b>ERIC GAGNON, tech.</b>	Date 2003/05/30
Vérifié par: Verified by:	<b>P-C.GAGNON, Ing.</b>	Date 2003/05/30
Approuvé par: Approved by:		Date

No. dossier: File no.:	08733	Échelle: Scale:	INDICATED
No. dessin: Drawing no.:	08733	No. feuille: Sheet no.:	13

Services techniques  
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 Informations techniques et graphiques  
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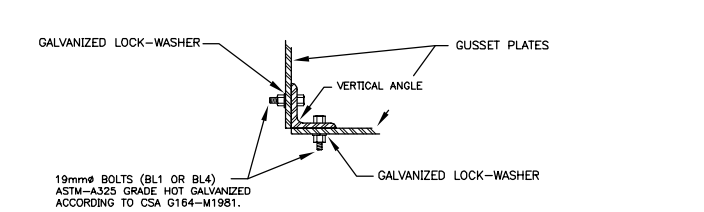
### MATERIAL LIST

CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	8	260.0
V6	L 102 X 102 X 13 X 3038	350 MPa	08733-23	8	464.2
V9	L 127 X 127 X 16 X 3038	350 MPa	08733-23	8	721.8
H8	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	39	421.2
H8A	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	13	140.4
H9	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	2	23.8
H10	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	1	11.9
H11	L 51 X 51 X 6.4 X 1504	350 MPa	08733-22	1	13.7
H12	L 76 X 76 X 7.9 X 1352	350 MPa	08733-22	2	24.3
H13	L 127 X 127 X 7.9 X 1352	350 MPa	08733-22	2	41.4
X3	L 76X 76 X 7.9 X 1677	350 MPa	08733-22	104	1569.7
X4	L 76 X 76 X 7.9 X 1884	350 MPa	08733-22	12	199.4
X5	FLAT BAR 50 X 6.4 X 1751	350 MPa	08733-22	3	13.5
X7	L 76 X 76 X 7.9 X 1743	350 MPa	08733-22	3	47.1
A3	PL 313 X 312 X 9.5	350 MPa	08733-21	6	43.7
A4	PL 328 X 328 X 6.4	350 MPa	08733-21	24	140.8
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	-	-
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
B5	PL 313 X 600 X 9.5	350 MPa	08733-21	32	429.6
B8	PL 313 X 534 X 9.5	350 MPa	08733-21	8	99.7
B9	PL 313 X 534 X 9.5	350 MPa	08733-21	32	399.0
B10	PL 313 X 534 X 9.5	350 MPa	08733-21	8	99.7
B11	PL 313 X 597 X 9.5	350 MPa	08733-21	8	111.5
B12	PL 313 X 660 X 9.5	350 MPa	08733-21	8	123.2
B15	PL 313 X 494 X 9.5	350 MPa	08733-21	8	91.7
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	28	24.8
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	13	12.9
J1	FLAT BAR 51 X 6.4 X 229	350 MPa	08733-24	14	8.2
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	61	26.2
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BAR	08733-24	1	17.5
P12	GRATING 762 X 1524	W30-102/32x4.8 SERRATED BAR	08733-24	2	69.2
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	32	99.2
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G2	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	128.3
C7	TOWER BASE	350 MPa	08733-21	4	187.1
E1	LADDER 3048	350 MPa	08733-24	6	190.6
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E5	LADDER 1296	350 MPa	08733-24	1	13.5
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
<b>TOTAL</b>				<b>6430.5</b>	

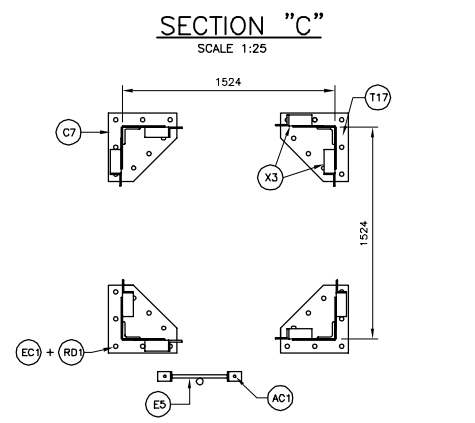
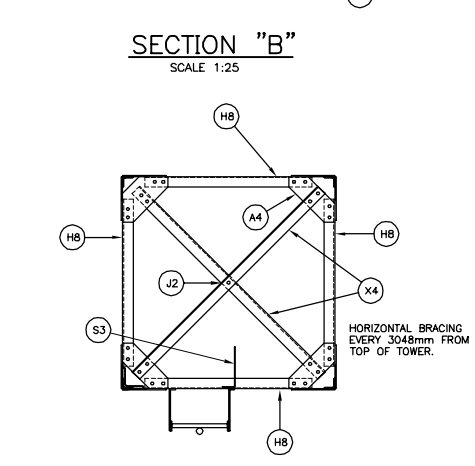
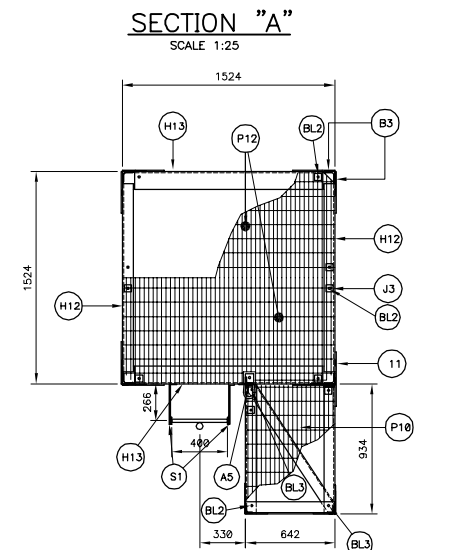
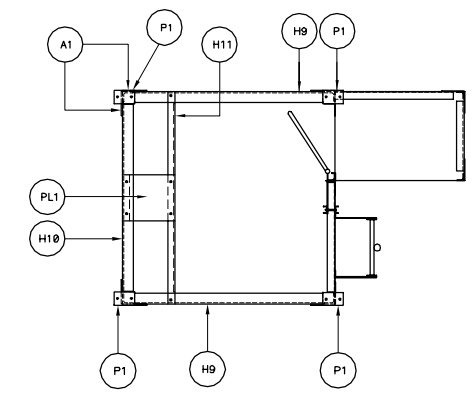
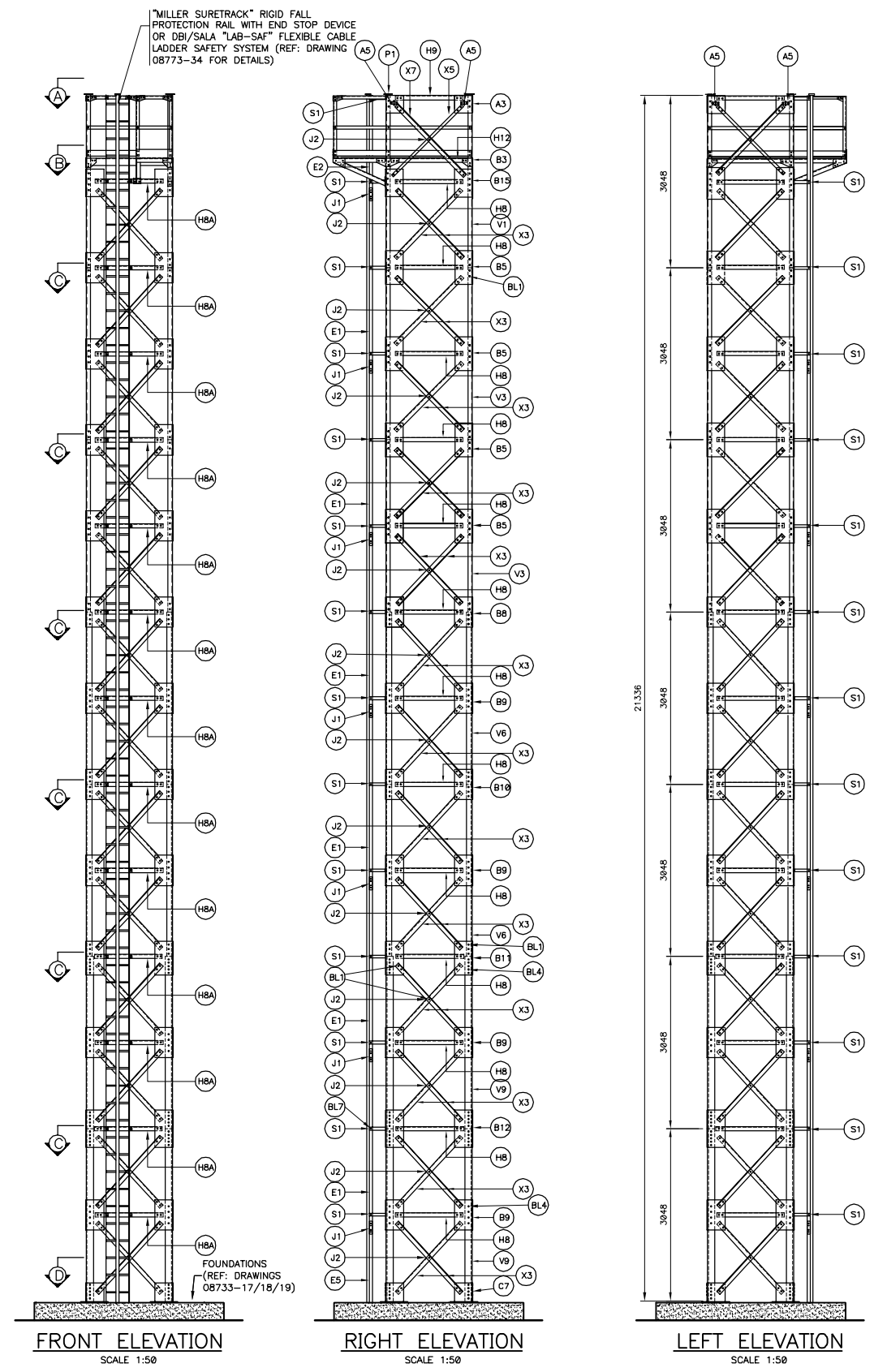
### BOLTS, NUTS AND WASHERS

BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1252	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	384	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	112	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	96	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	64	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, H165mm	ASTM-A325, HY-150 FROM HLT1	08733-24 (E4)	2	S/O

**NOTES:**  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6184 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.



**BOLTING DETAIL (TYPE)**  
 N.T.S.



Revisión	Description	Par/By	Date
4	PLATE B5 AND B15 REVERSED	L.T.G.	05-04-08
3	FALL ARRESTING DEVICE FOR CONSTRUCTION	P.-C.G.	04-11-03
2	DEFINITIVE	P.-C.G.	04-05-31
1	DEFINITIVE	P.-C.G.	03-12-03

A: Numéro du détail / Detail no.  
 B: Feuille sur laquelle le détail est référencé / Location drawing no.  
 C: Feuille sur laquelle le détail est dessiné / Drawing no.

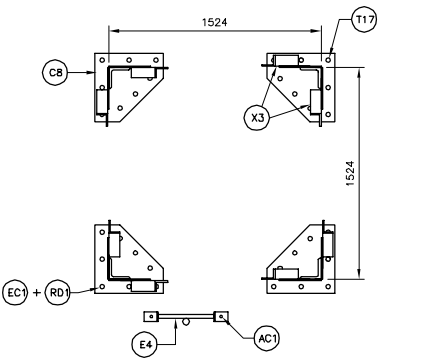
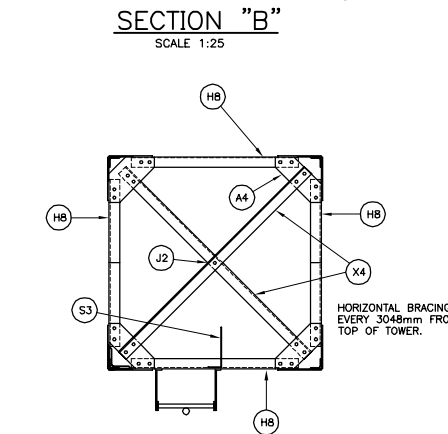
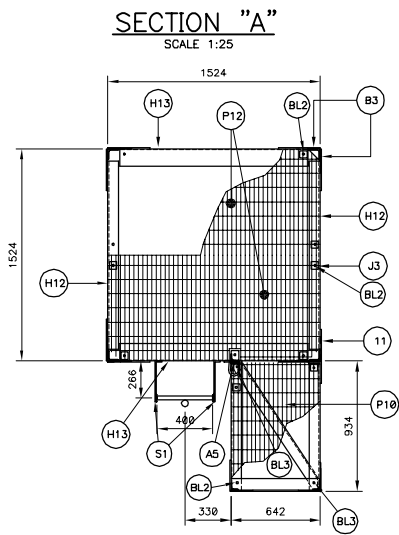
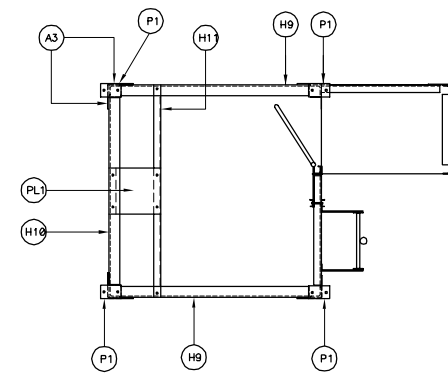
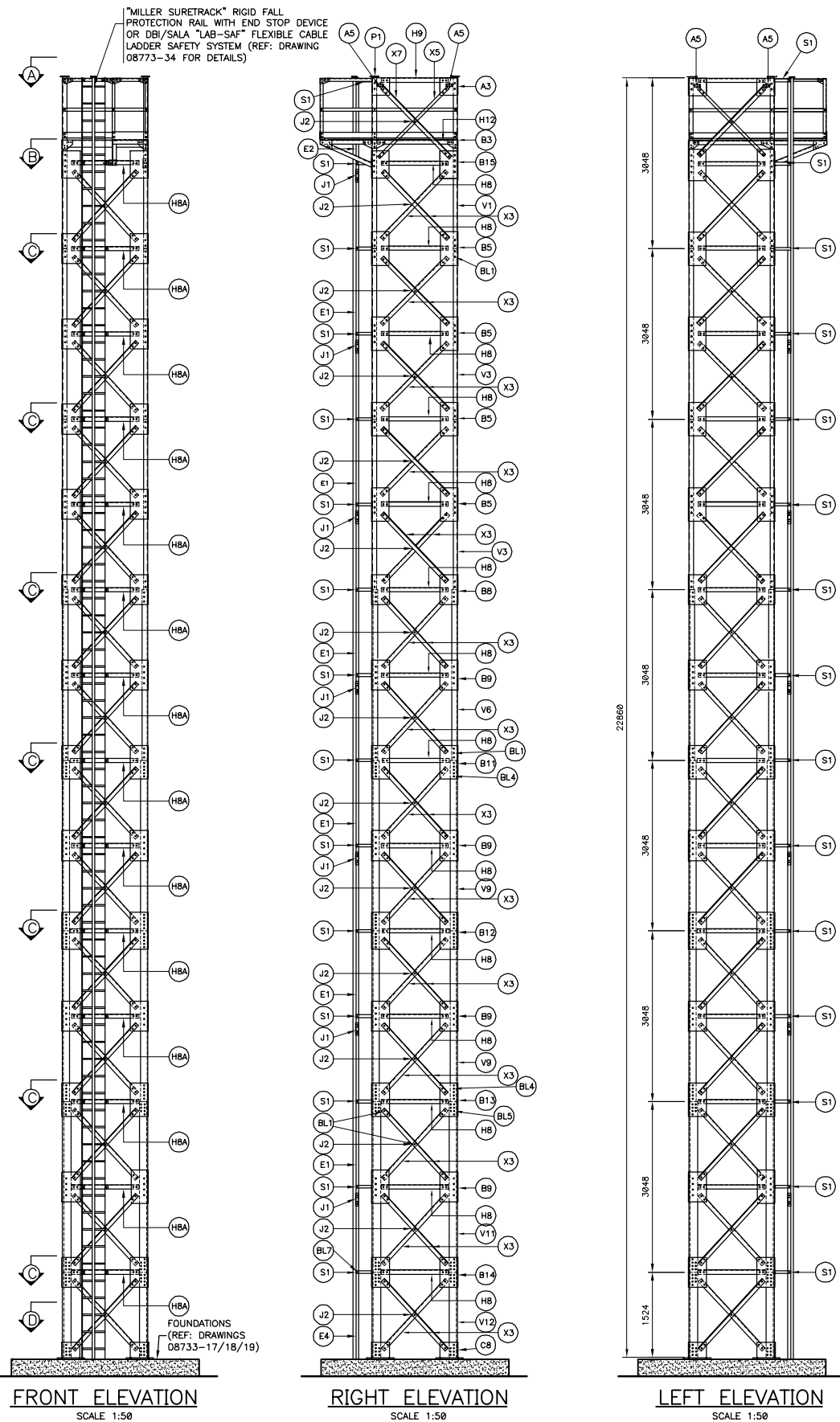
Toute modification doit être rapportée à: / All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24,4m (80ft)

21.3m TOWER (70ft)  
 ERECTING PLAN

Conçu par: / Designed by:	<b>P.-C.GAGNON, Ing.</b>	Date: / Date:	<b>2003/05/30</b>
Dessiné par: / Drawn by:	<b>ERIC GAGNON, tech.</b>	Date: / Date:	<b>2003/05/30</b>
Vérifié par: / Verified by:	<b>P.-C.GAGNON, Ing.</b>	Date: / Date:	<b>2003/05/30</b>
Approuvé par: / Approved by:		Date: / Date:	
No. dossier: / File no.:		Echelle: / Scale:	<b>INDICATED</b>
No. dessin: / Drawing no.:	<b>08733</b>	No. feuille: / Sheet no.:	<b>14</b>



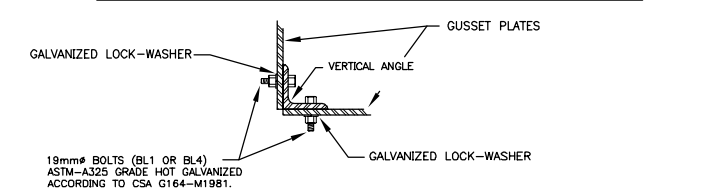
MATERIAL LIST					
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	8	260.0
V6	L 102 X 102 X 13 X 3038	350 MPa	08733-23	4	232.1
V9	L 127 X 127 X 16 X 3038	350 MPa	08733-23	8	721.8
V11	L 152 X 152 X 19 X 3038	350 MPa	08733-23	4	518.9
V12	L 152 X 152 X 19 X 1514	350 MPa	08733-23	4	258.6
H8	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	42	453.6
H8A	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	14	151.2
H9	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	2	23.8
H10	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	1	11.9
H11	L 51 X 51 X 6.4 X 1524	350 MPa	08733-22	1	13.7
H12	L 76 X 76 X 7.9 X 1352	350 MPa	08733-22	2	24.3
H13	L 127 X 127 X 7.9 X 1352	350 MPa	08733-22	2	41.4
X3	L 76 X 76 X 7.9 X 1877	350 MPa	08733-22	112	1690.4
X4	L 76 X 76 X 7.9 X 1884	350 MPa	08733-22	14	232.3
X5	FLAT BAR 51 X 6.4 X 1751	350 MPa	08733-22	3	13.5
X7	L 76 X 76 X 7.9 X 1743	350 MPa	08733-22	3	47.1
A3	PL 313 X 312 X 9.5	350 MPa	08733-21	6	43.7
A4	PL 328 X 328 X 6.4	350 MPa	08733-21	28	164.3
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101630	350 MPa	-	-	-
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
B5	PL 313 X 600 X 9.5	350 MPa	08733-21	32	429.6
B8	PL 313 X 534 X 9.5	350 MPa	08733-21	8	99.7
B9	PL 313 X 534 X 9.5	350 MPa	08733-21	32	399.0
B11	PL 313 X 597 X 9.5	350 MPa	08733-21	8	111.5
B12	PL 313 X 660 X 9.5	350 MPa	08733-21	8	123.2
B13	PL 313 X 597 X 12.7	350 MPa	08733-21	8	149.0
B14	PL 313 X 534 X 12.7	350 MPa	08733-21	8	99.7
B15	PL 313 X 494 X 9.5	350 MPa	08733-21	8	91.7
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	30	26.3
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	14	13.9
J1	FLAT BAR 51 X 6.4 X 229	350 MPa	08733-24	14	8.2
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	66	28.4
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	16	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BAR	08733-24	1	17.5
P12	GRATING 762 X 1524	W30-102/32x4.8 SERRATED BAR	08733-24	2	69.2
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	32	99.2
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	128.3
C8	TOWER BASE	350 MPa	08733-21	4	194.5
E1	LADDER 3048	350 MPa	08733-24	6	190.6
E2	LADDER 1753	350 MPa	08733-24	1	18.7
E4	LADDER 2838	350 MPa	08733-24	1	29.4
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>7387.5</b>

NOTE:  
THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8631 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS					
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1334	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	224	S/O
BL5	Ø19mm X 64mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	256	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	116	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	72	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, H=165mm	ASTM-A325 HY-150 FROM H/LTI	08733-24 (E4)	2	S/O

NOTES:  
- ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6164 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
- BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.

NOTES:  
- CAPACITY OF STRUCTURE TO WHICH "D-RING" ANCHORAGE CONNECTOR IS ATTACHED = 18 kN  
- "D-RING" ANCHORAGE CONNECTOR:  
\* NO MORE THAN ONE PERSONAL PROTECTIVE SYSTEM MAY BE CONNECTED AT ONE TIME.  
\* MAXIMUM CAPACITY = 140 kg.  
\* MAXIMUM FREE FALL HEIGHT = 1.8m



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Services techniques / Systems électroniques et informatiques / Informations techniques et graphiques  
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PLATE 85-011-012- 015 REVISION	LT.A	05-04-08
4 FALL ARRESTING DEVICE	P-C.G.	04-11-23
3 FOR CONSTRUCTION	P-C.G.	04-05-31
2 DEFINITIVE	P-C.G.	04-01-08
1 DEFINITIVE	P-C.G.	03-12-23

Revisión / Description / Par/By / Date

A: Numéro du détail / Detail no.  
B: Feuille sur laquelle le détail est référencé / Location drawing no.  
C: Feuille sur laquelle le détail est dessiné / Drawing no.

Toute modification doit être rapportée à: / All modification must be reported to:  
GARDE CÔTIÈRE, RÉGION LAURENTIENNE / SERVICES TECHNIQUES / Systèmes électroniques et informatiques / Informations Techniques et Graphiques

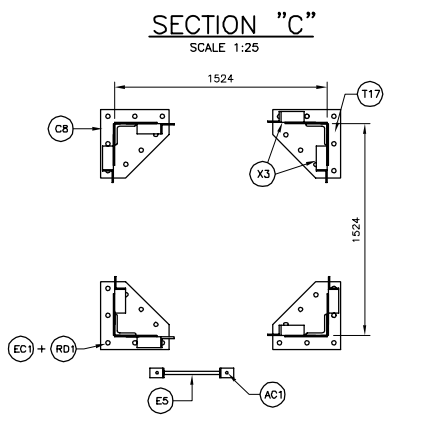
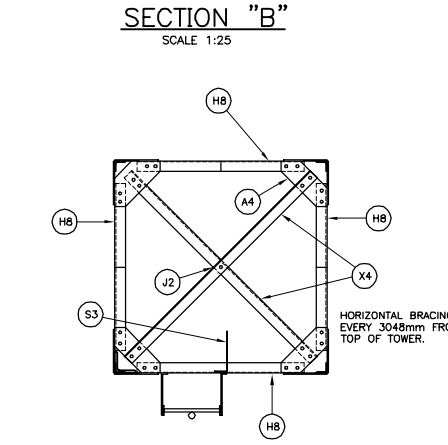
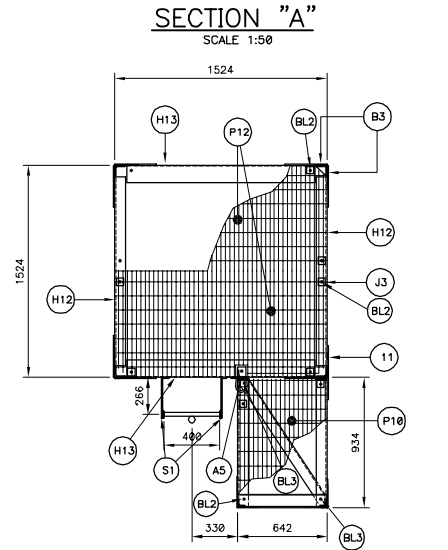
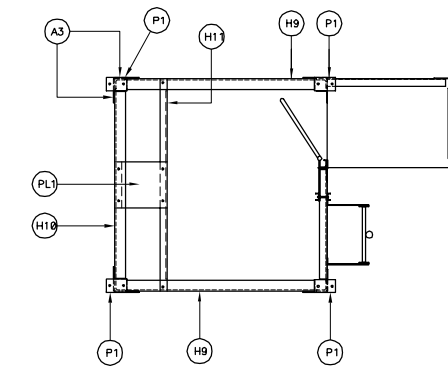
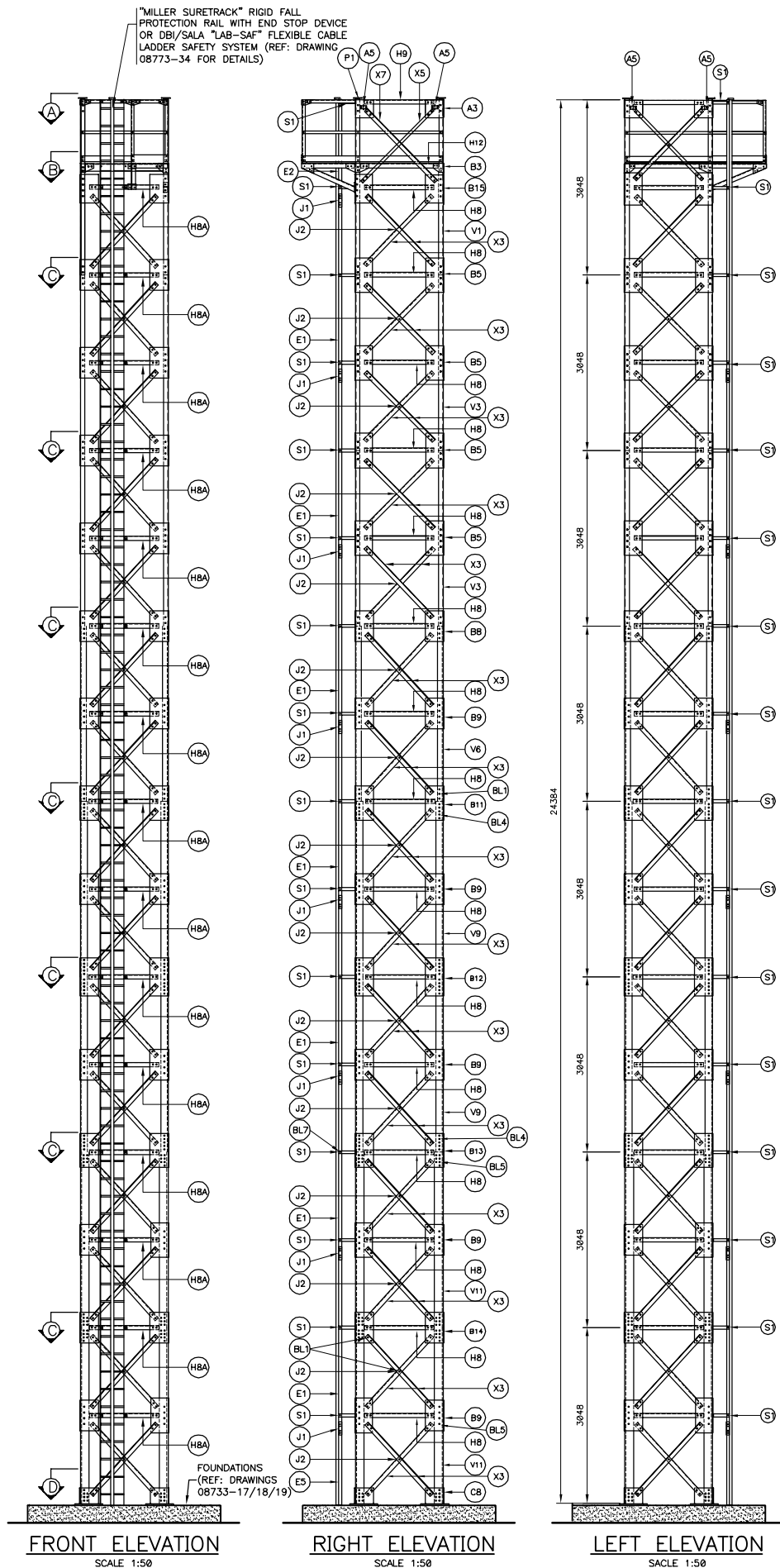
Dossier: / File:  
**LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin: / Drawing:  
22.8m TOWER (75ft) / ERECTING PLAN

Conçu par: / Designed by: P-C.GAGNON, Ing. / Date: 2003/05/30  
Dessiné par: / Drawn by: ERIC GAGNON, tech. / Date: 2003/05/30  
Vérifié par: / Verified by: P-C.GAGNON, Ing. / Date: 2003/05/30  
Approuvé par: / Approved by: / Date: /

No. dossier: / File no.: / Échelle: / Scale: / INDICATED  
No. dessin: / Drawing no.: / No. feuille: / Sheet no.: /

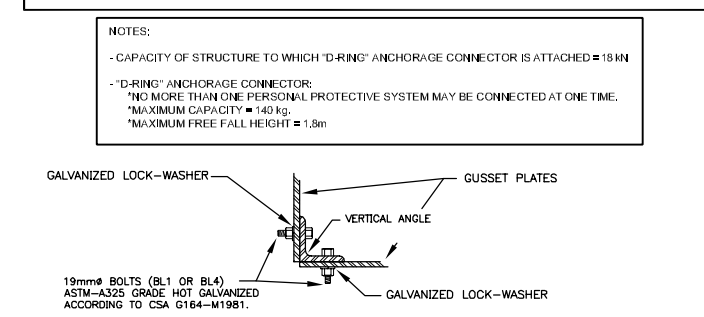
08733 / 15



MATERIAL LIST					
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
PL1	PL 375 X 330 X 3.2	350 MPa	08733-21	1	3.1
V1	L 76 X 76 X 9.5 X 3063	350 MPa	08733-23	4	131.1
V3	L 76 X 76 X 9.5 X 3038	350 MPa	08733-23	8	260.0
V6	L 102 X 102 X 13 X 3038	350 MPa	08733-23	4	232.1
V9	L 127 X 127 X 16 X 3038	350 MPa	08733-23	8	721.8
V11	L 152 X 152 X 19 X 3038	350 MPa	08733-23	8	1037.8
H8	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	45	486.0
H8A	L 76 X 76 X 7.9 X 1200	350 MPa	08733-22	15	162.0
H9	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	2	23.8
H10	L 76 X 76 X 7.9 X 1322	350 MPa	08733-22	1	11.9
H11	L 51 X 51 X 5.1 X 6.4 X 1524	350 MPa	08733-22	1	13.7
H12	L 76 X 76 X 7.9 X 1352	350 MPa	08733-22	2	24.3
H13	L 127 X 127 X 7.9 X 1352	350 MPa	08733-22	2	41.4
X3	L 76 X 76 X 7.9 X 1677	350 MPa	08733-22	123	1811.2
X4	L 76 X 76 X 7.9 X 1884	350 MPa	08733-22	14	232.4
X5	FLAT BAR 50 X 6.4 X 1751	350 MPa	08733-22	3	13.5
X7	L 76 X 76 X 7.9 X 1743	350 MPa	08733-22	3	47.1
A3	PL 312 X 313 X 9.5	350 MPa	08733-21	6	43.7
A4	PL 328 X 328 X 6.4	350 MPa	08733-21	28	184.8
A5	"D-RING" ANCHORAGE PLATE FROM "SALA" MODEL #2101830	350 MPa	-	-	-
B3	PL 229 X 150 X 9.5	350 MPa	08733-21	7	17.9
B5	PL 313 X 600 X 9.5	350 MPa	08733-21	32	429.6
BB	PL 313 X 534 X 9.5	350 MPa	08733-21	8	99.7
BB	PL 313 X 534 X 9.5	350 MPa	08733-21	40	486.6
B11	PL 313 X 597 X 9.5	350 MPa	08733-21	8	111.5
B12	PL 313 X 660 X 9.5	350 MPa	08733-21	8	123.2
B13	PL 313 X 597 X 12.7	350 MPa	08733-21	8	149.0
B14	PL 313 X 534 X 12.7	350 MPa	08733-21	8	99.7
B15	PL 313 X 494 X 9.5	350 MPa	08733-21	8	91.7
S1	FLAT BAR 51 X 6.4 X 342	350 MPa	08733-24	32	26.3
S3	FLAT BAR 51 X 6.4 X 387	350 MPa	08733-24	15	14.9
J1	FLAT BAR 51 X 6.4 X 229	350 MPa	08733-24	16	9.4
J2	SPACER PL 76 X 76 X 9.5	350 MPa	08733-24	25	10.8
J3	SPACER PL 51 X 51 X 7.9	350 MPa	08733-24	12	1.9
P10	GRATING 916 X 640	W30-102/32x4.8 SERRATED BAR	08733-24	1	17.5
P12	GRATING 762 X 1524	W30-102/32x4.8 SERRATED BAR	08733-24	2	69.7
T17	ANCHOR BOLTS 250	ASTM-A325M	08733-21	24	49.8
P1	PL 92 X 152 X 6.4	350 MPa	08733-21	4	2.8
G1	RAILING AND UPPER DECK	350 MPa	08733-25/26	1	128.3
CB	TOWER BASE	350 MPa	08733-21	4	194.5
E1	LADDER 3048	350 MPa	08733-24	7	222.4
E2	LADDER 1753	350 MPa	08733-24	1	16.7
E5	LADDER 1296	350 MPa	08733-24	1	13.5
-	GALVANIZED FALL PROTECTION DEVICE	-	08733-34	1	-
				<b>TOTAL</b>	<b>7899.8</b>

NOTE:  
THE TOWER SHALL BE EQUIPPED WITH "MILLER" LADDER CLIMBING RAILS "SHURE TRACK" TYPE, MODEL 8631 OR EQUIVALENT TO BE APPROVED BY CCG WITH NECESSARY ASSEMBLY AND INSTALLATION HARDWARE ON THE TOWER.

BOLTS, NUTS AND WASHERS					
BL1	Ø19mm X 50mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	1410	S/O
BL2	Ø13mm X 76mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	12	S/O
BL3	Ø13mm X 89mm BOLT WITH NUT AND LOCK WASHER Ø48mm	ASTM-A325	S/O	2	S/O
BL4	Ø19mm X 57mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	256	S/O
BL5	Ø19mm X 64mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	288	S/O
BL7	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	128	S/O
EC1	ANCHOR BOLT NUTS Ø25mm	240 MPa	08733-21 (T17)	72	S/O
RD1	ANCHOR BOLT WASHERS Ø25mm	240 MPa	08733-21 (T17)	48	S/O
AC1	CHEMICAL ANCHORAGE FOR LADDER, Ø13mm, 165mm	ASTM-A325, HY-150 FROM HILTI	08733-24 (E4)	2	S/O



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Revisión	Description	Par/By	Date
4	FLAT ARRESTING DEVICE	P-C.G.	04-11-23
3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-23

A: Numéro du détail / Detail no.  
B: Feuille sur laquelle le détail est référencé / Location drawing no.  
C: Feuille sur laquelle le détail est dessiné / Drawing no.

Toute modification doit être rapportée à: / All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE / SERVICES TECHNIQUES / Systèmes électroniques et informatiques / Informations Techniques et Graphiques

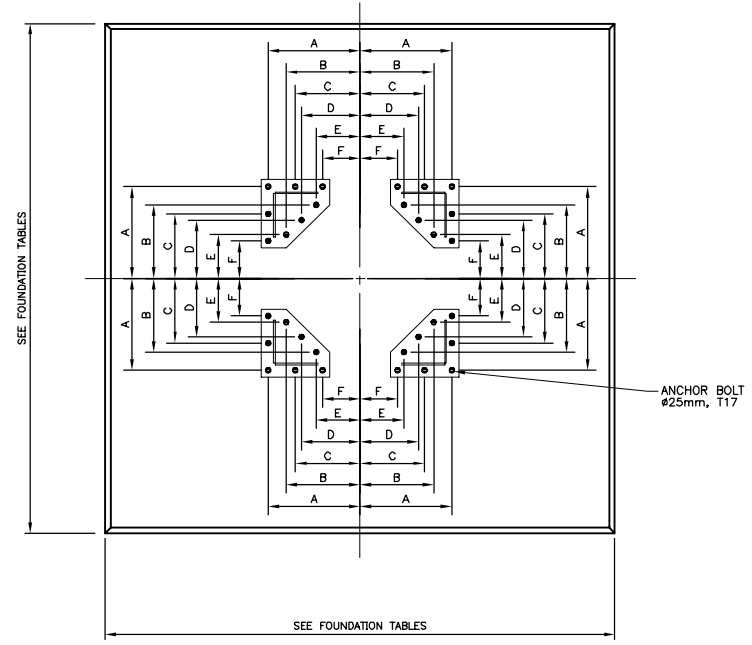
Dossier: / File: **LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin: / Drawing: **24.4m TOWER (80ft) / ERECTING PLAN**

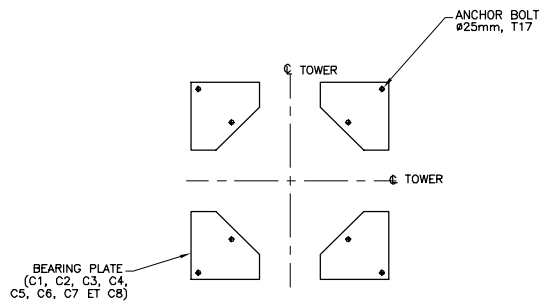
Conçu par: / Designed by: **P-C.GAGNON, Ing.** / Date: **2003/05/30**  
Dessiné par: / Drawn by: **ERIC GAGNON, tech.** / Date: **2003/05/30**  
Vérifié par: / Verified by: **P-C.GAGNON, Ing.** / Date: **2003/05/30**  
Approuvé par: / Approved by: \_\_\_\_\_ / Date: \_\_\_\_\_

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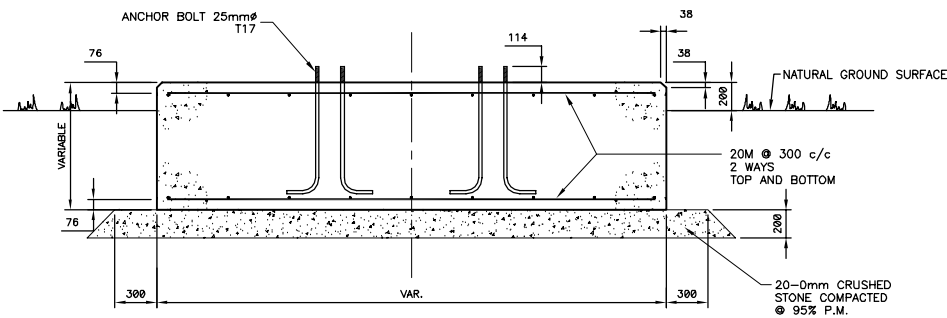
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PLAN VIEW  
 STANDARD FOUNDATION  
 SCALE 1:25



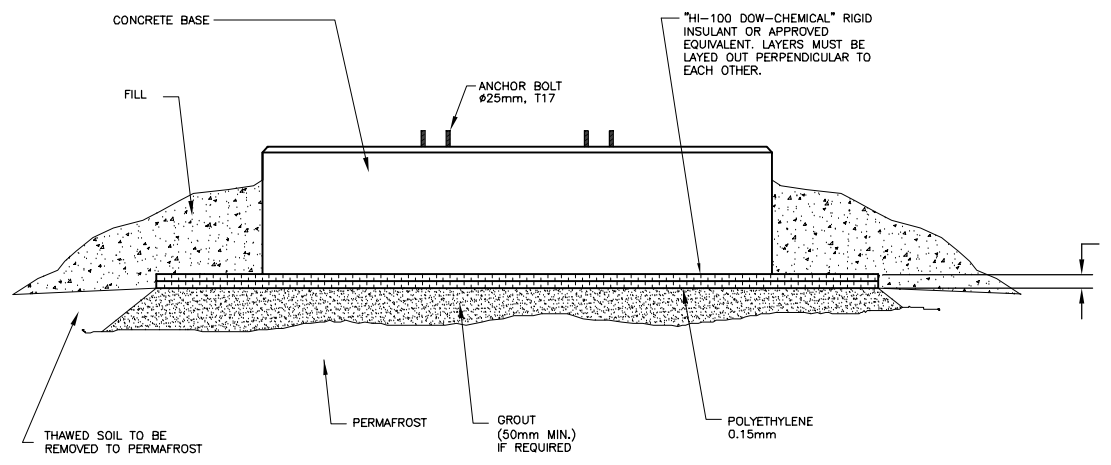
PLAN VIEW  
 STANDARD FONDATION  
 SCALE 1:25



SECTION "A"  
 SCALE 1:25

CONCRETE					
CLASS OF EXPOSURE	28 DAYS COMPRESSIVE STRENGTH (MPa)	SUMP (mm.)	AIR CONTENT	AGGREGATES (MAX.) (mm)	PORTLAND CEMENT
E-1	35 MPa	80±20	5 @ 8%	20	TYPE 10SF

- CASTING : CAN/CSA - A23.1-94  
 - CURING : CAN/CSA - A23.1-94



SECTION "A"  
 FOUNDATION ON PERMAFROST  
 SCALE 1:25

FOUNDATION 500 Pa WIND ZONE											
HEIGHT (m)	THICKNESS (mm)	LENGTH (mm)	WIDTH (mm)	NUMBER OF ANCHOR BOLTS 25mmØ-A325	BASE PLATE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"
3.0 (10ft)	610	1829	1829	8	C1	660	-	-	420	-	-
4.6 (15ft)	610	1829	1829	8	C1	660	-	-	420	-	-
6.1 (20ft)	914	2438	2438	8	C1	660	-	-	420	-	-
7.6 (25ft)	914	3048	3048	8	C2	660	-	-	420	-	-
9.1 (30ft)	914	3658	3658	8	C2	660	-	-	420	-	-
10.7 (35ft)	914	3962	3962	8	C3	660	-	-	420	-	-
12.2 (40ft)	914	4267	4267	8	C3	660	-	-	420	-	-
13.7 (45ft)	914	4572	4572	8	C4	660	-	-	420	-	-
15.2 (50ft)	1219	4572	4572	8	C4	660	-	-	420	-	-
16.8 (55ft)	1219	4877	4877	16	C5	660	-	-	420	-	270
18.3 (60ft)	1219	5182	8182	16	C5	660	-	-	420	-	270
19.8 (65ft)	1219	5182	5182	16	C6	812	-	-	572	-	422
21.3 (70ft)	1219	5488	5488	16	C7	812	-	-	572	-	422
22.9 (75ft)	1219	5791	5791	16	C8	812	-	-	572	-	422
24.4 (80ft)	1219	6096	6096	16	C8	812	-	-	572	-	422

FOUNDATION 1135 Pa WIND ZONE											
HEIGHT (m)	THICKNESS (mm)	LENGTH (mm)	WIDTH (mm)	NUMBER OF ANCHOR BOLTS 25mmØ-A325	BASE PLATE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"
3.0 (10ft)	914	1829	1829	8	C1	660	-	-	420	-	-
4.6 (15ft)	914	2134	2134	8	C1	660	-	-	420	-	-
6.1 (20ft)	914	3048	3048	8	C1	660	-	-	420	-	-
7.6 (25ft)	914	4267	4267	8	C2	660	-	-	420	-	-
9.1 (30ft)	1219	4267	4267	8	C2	660	-	-	420	-	-
10.7 (35ft)	1219	4877	4877	16	C3	660	-	-	420	-	270
12.2 (40ft)	1219	5488	5488	16	C3	660	-	-	420	-	270
13.7 (45ft)	1219	5791	5791	16	C4	660	-	-	420	-	270
15.2 (50ft)	1219	6401	6401	24	C4	660	-	-	420	-	270
16.8 (55ft)	1219	6706	6706	24	C5	660	-	465	420	-	270
18.3 (60ft)	1219	7010	7010	24	C5	660	-	465	420	-	270
19.8 (65ft)	1219	7010	7010	24	C6	812	-	617	572	-	422
21.3 (70ft)	1219	7620	7620	32	C7	812	682	617	572	467	422
22.9 (75ft)	1219	7925	7925	32	C8	812	682	617	572	467	422
24.4 (80ft)	1219	8230	8230	32	C8	812	682	617	572	467	422

\* WHEN STEEL FENCE IS INCLUDED IN CONTRACT, MINIMUM DIMENSIONS OF CONCRETE FOUNDATION SHALL BE 2439x2439xREQUIRED THICKNESS.

NOTE: -ASSUMED BEARING CAPACITY OF SOIL = 100 kPa  
 -TOP SOIL SHALL BE REMOVED.  
 -20-0mm GRANULAR FOUNDATION MAY BE REPLACED BY AN EQUIVALENT DRAINING MATERIAL OR BY UNDISTURBED SOIL FOLLOWING GEOTECHNICAL LABORATORY RECOMMENDATIONS.

3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est référencé		
C	Location drawing no		

Toute modification doit être rapportée à:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

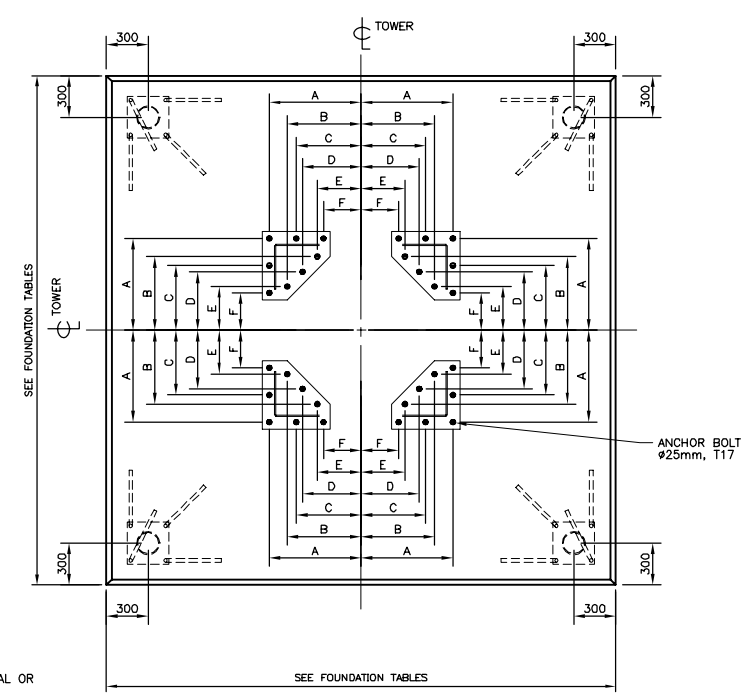
Dossier:  
 LATTICED STEEL TOWERS  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessiné par:  
 ERIC GAGNON, tech. 2003/05/30  
 Date

Approuvé par:  
 P.-C. GAGNON, Ing. 2003/05/30  
 Date

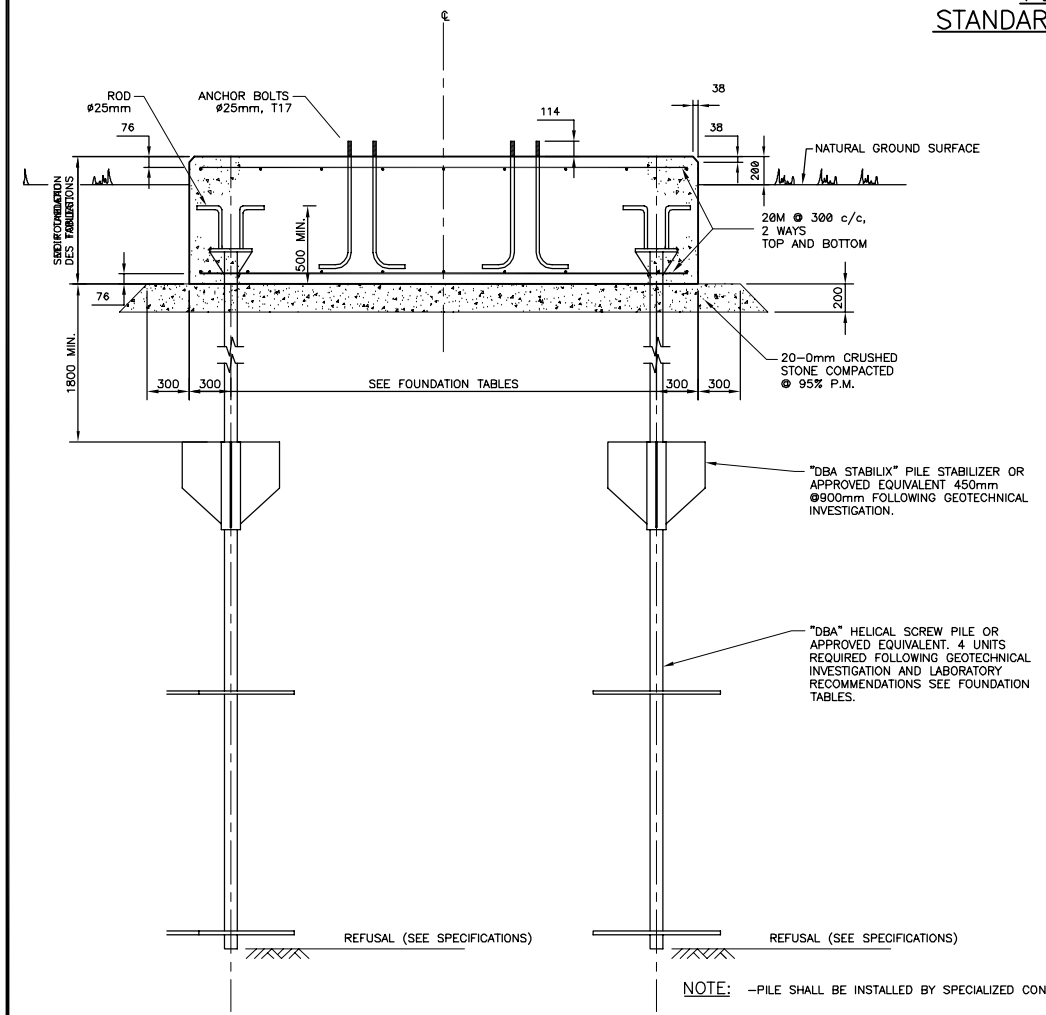
No. dossier: 08733  
 No. feuille: 17  
 Echelle: INDICATED

Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Blvd. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7



NOTE: -ASSUMED BEARING CAPACITY OF SOIL = 100 kPa  
 -TOP SOIL SHALL BE REMOVED.  
 -20-0mm GRANULAR FOUNDATION MAY BE REPLACED BY AN EQUIVALENT DRAINING MATERIAL OR BY UNDISTURBED SOIL FOLLOWING GEOTECHNICAL LABORATORY RECOMMENDATIONS.

PLAN VIEW  
 STANDARD FOUNDATION  
 SCALE 1:25



CONCRETE					
CLASS OF EXPOSURE	28 DAYS COMPRESSIVE STRENGTH (MPa)	SUMP (mm.)	AIR CONTENT	AGGREGATES (MAX.) (mm)	PORTLAND CEMENT
E-1	35 MPa	80±20	5 @ 8%	20	TYPE 10SF

- CASTING : CAN/CSA - A23.1-94  
 - CURING : CAN/CSA - A23.1-94

NOTE: -PILE SHALL BE INSTALLED BY SPECIALIZED CONTRACTOR  
 \*MINIMUM TESTING LOADS:  
 -AXIAL COMPRESSION: 200% OF CHARGE TO BE RESISTED INDICATED IN TABLES.  
 -AXIAL TENSION: 150% OF CHARGE TO BE RESISTED INDICATED IN TABLES.  
 \* AT LEAST ONE (1) PILE SHALL BE TESTED.

SECTION "A"  
 SCALE 1:25

FOUNDATION 1135 Pa WIND ZONE													
HEIGHT (m)	THICKNESS (mm)	LENGTH (mm)	WIDTH (mm)	NUMBER OF ANCHOR BOLTS 25mmØ-A325	PILE DIAMETER (mm)	LOAD TO BE RESISTED / PILE (kN)	BASE PLATE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"
3.0 (10ft)	915	1829	1829	8	-	-	C1	680	-	-	420	-	-
4.6 (15ft)	915	1829	1829	8	89	14	C1	680	-	-	420	-	-
6.1 (20ft)	915	1829	1829	8	114	61	C1	680	-	-	420	-	-
7.6 (25ft)	915	1829	1829	8	114	145	C2	680	-	-	420	-	-
9.1 (30ft)	915	1829	1829	8	114	155	C2	680	-	-	420	-	-
10.7 (35ft)	1219	2439	2439	16	114	212	C3	680	-	-	420	-	270
12.2 (40ft)	1219	2439	2439	16	165	274	C3	680	-	-	420	-	270
13.7 (45ft)	1219	2439	2439	16	165	341	C4	680	-	-	420	-	270
15.2 (50ft)	1219	3048	3048	24	165	340	C4	680	-	485	420	-	270
16.8 (55ft)	1219	3048	3048	24	165	400	C5	680	-	485	420	-	270
18.3 (60ft)	914	3048	3048	24	165	451	C5	680	-	485	420	-	270
19.8 (65ft)	914	3658	3658	24	165	484	C6	812	-	617	572	-	422
21.3 (70ft)	914	3658	3658	32	165	478	C7	812	682	617	572	467	422
22.9 (75ft)	914	3658	3658	32	165	429	C8	812	682	617	572	467	422
24.4 (80ft)	914	3658	3658	32	165	492	C8	812	682	617	572	467	422

FOUNDATION 500 Pa WIND ZONE													
HEIGHT (m)	THICKNESS (mm)	LENGTH (mm)	WIDTH (mm)	NUMBER OF ANCHOR BOLTS 25mmØ-A325	PILE DIAMETER (mm)	LOAD TO BE RESISTED / PILE (kN)	BASE PLATE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"
3.0 (10ft)	915	1829	1829	8	-	-	C1	680	-	-	420	-	-
4.6 (15ft)	915	1829	1829	8	-	-	C1	680	-	-	420	-	-
6.1 (20ft)	915	1829	1829	8	114	18	C1	680	-	-	420	-	-
7.6 (25ft)	915	1829	1829	8	114	54	C2	680	-	-	420	-	-
9.1 (30ft)	915	1829	1829	8	114	84	C2	680	-	-	420	-	-
10.7 (35ft)	1219	2439	2439	8	114	116	C3	680	-	-	420	-	-
12.2 (40ft)	1219	2439	2439	8	114	151	C3	680	-	-	420	-	-
13.7 (45ft)	1219	2439	2439	8	114	187	C4	680	-	-	420	-	-
15.2 (50ft)	1219	3048	3048	8	114	171	C4	680	-	-	420	-	-
16.8 (55ft)	1219	3048	3048	16	114	199	C5	680	-	-	420	-	270
18.3 (60ft)	914	3048	3048	16	114	188	C5	680	-	-	420	-	270
19.8 (65ft)	914	3658	3658	16	114	199	C6	812	-	-	572	-	422
21.3 (70ft)	914	3658	3658	16	114	171	C7	812	-	-	572	-	422
22.9 (75ft)	914	3658	3658	16	114	177	C8	812	-	-	572	-	422
24.4 (80ft)	914	3658	3658	16	114	182	C8	812	-	-	572	-	422

\* WHEN STEEL FENCE IS INCLUDED IN CONTRACT, MINIMUM DIMENSIONS OF CONCRETE FOUNDATION SHALL BE 2439x2439xREQUIRED THICKNESS.

4	FOR CONSTRUCTION, REVISION 1	P-C.G. 04-08-01
3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-83

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est référencé		
C	Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
 FOUNDATIONS AND ANCHORAGE  
 OPTION "2"  
 ERECTING PLAN

Conçu par:  
 Drawn by:  
**P.-C. GAGNON, Ing. 2003/05/30**

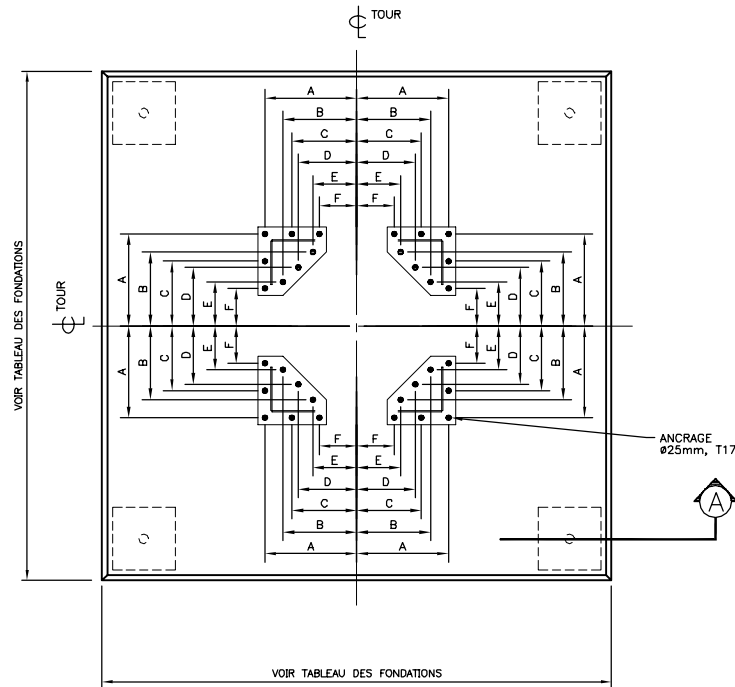
Dessiné par:  
 Drawn by:  
**ERIC GAGNON, tech. 2003/05/30**

Vérifié par:  
 Verified by:  
**P.-C. GAGNON, Ing. 2003/05/30**

Approuvé par:  
 Approved by:

No. dossier: File no.:	Échelle: Scale:
<b>INDICATED</b>	
No. dessin: Drawing no.:	No. feuille: Sheet no.:
08733	18

Services techniques et Informatiques  
Systèmes électroniques et Informatiques  
Informations techniques et graphiques  
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Québec (Québec) G1K 7Y7



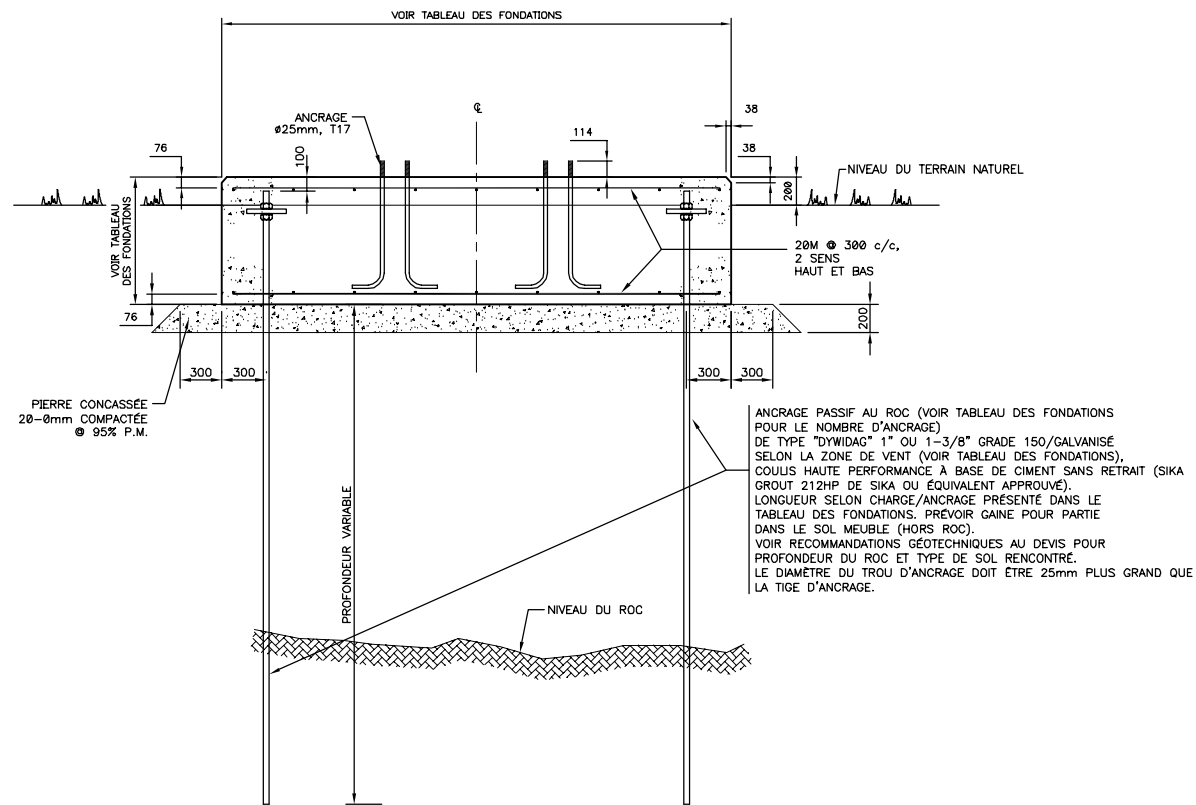
BÉTON					
TYPE DE BÉTON	RÉSISTANCE À 28 JOURS (MPa)	AFFAISSEMENT (mm.)	AIR ENTRAÎNÉ (%)	GRANULATS (MAX.) (mm)	CIMENT
E-1	35 MPa	80±20	5 @ 8%	20	TYPE 10SF

- MISE EN PLACE : CAN/CSA - A23.1-94  
- CURE : CAN/CSA - A23.1-94

VUE EN PLAN  
FONDATION SUR LE ROC

ECH.: 1:25

NOTE: -CAPACITÉ PORTANTE DU SOL ASSUMÉE = 100 kPa  
-LA TERRE VÉGÉTALE DOIT ÊTRE ENLEVÉE.  
-LA FONDATION DE 20-0mm PEUT ÊTRE REMPLACÉE PAR UN MATÉRIAU DRAINANT ÉQUIVALENT OU PAR LE SOL NON-REMANIÉ SELON LES RECOMMANDATIONS DU LABORATOIRE GÉOTECHNIQUE.



NOTE: -CHAQUE ANCRAGE AU ROC DOIT ÊTRE TESTÉ PAR UNE MISE EN TENSION DE 100% DE LA CHARGE À COMPENSER INDICUÉE AU TABLEAU POUR UNE PÉRIODE MINIMALE DE 15min.

COUPE "A"  
ECH.: 1:25

TABLEAU DES FONDATIONS  
ZONE DE VENT= 1135Pa

HAUTEUR DE LA TOUR (m)	ÉPAISSEUR (mm)	LONGUEUR (mm)	LARGEUR (mm)	NOMBRE DE BOULONS 25mmØ-A325	NOMBRE D'ANCRAGE "DYWIDAG" 1-3/8"Ø	CHARGE À COMPENSER/ANCRAGE (kN)	PLAQUE D'ASSISE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"
3,0 (10p)	610	1829	1829	8	-	-	C1	660	-	-	420	-	-
4,6 (15p)	610	1829	1829	8	4	14,48	C1	660	-	-	420	-	-
6,1 (20p)	610	1829	1829	8	4	61,24	C1	660	-	-	420	-	-
7,6 (25p)	610	1829	1829	8	4	145,70	C2	660	-	-	420	-	-
9,1 (30p)	610	2439	2439	8	4	155,19	C2	660	-	-	420	-	-
10,7 (35p)	610	2439	2439	16	4	212,18	C3	660	-	-	420	-	270
12,2 (40p)	610	2439	2439	16	4	274,64	C3	660	-	-	420	-	270
13,7 (45p)	610	3048	3048	16	4	341,04	C4	660	-	-	420	-	270
15,2 (50p)	610	3048	3048	24	4	339,75	C4	660	-	465	420	-	270
16,8 (55p)	610	3048	3048	24	8	266,04	C5	660	-	465	420	-	270
18,3 (60p)	610	3048	3048	24	8	311,54	C5	660	-	465	420	-	270
19,8 (65p)	610	3048	3048	24	8	333,62	C6	812	-	617	572	-	422
21,3 (70p)	610	3658	3658	32	8	334,61	C7	812	682	617	572	467	422
22,9 (75p)	610	4572	4572	32	8	309,79	C8	812	682	617	572	467	422
24,4 (80p)	610	4572	4572	32	8	351,79	C8	812	682	617	572	467	422

TABLEAU DES FONDATIONS  
ZONE DE VENT= 500Pa

HAUTEUR DE LA TOUR (m)	ÉPAISSEUR (mm)	LONGUEUR (mm)	LARGEUR (mm)	NOMBRE DE BOULONS 25mmØ-A325	NOMBRE D'ANCRAGE "DYWIDAG" 1"Ø	CHARGE À COMPENSER/ANCRAGE (kN)	PLAQUE D'ASSISE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"
3,0 (10p)	610	1829	1829	8	-	-	C1	660	-	-	420	-	-
4,6 (15p)	610	1829	1829	8	-	-	C1	660	-	-	420	-	-
6,1 (20p)	610	1829	1829	8	4	18,05	C1	660	-	-	420	-	-
7,6 (25p)	610	1829	1829	8	4	54,36	C2	660	-	-	420	-	-
9,1 (30p)	610	1829	1829	8	4	84,21	C2	660	-	-	420	-	-
10,7 (35p)	610	1829	1829	8	4	115,91	C3	660	-	-	420	-	-
12,2 (40p)	610	1829	1829	8	4	150,65	C3	660	-	-	420	-	-
13,7 (45p)	610	1829	1829	8	4	167,44	C4	660	-	-	420	-	-
15,2 (50p)	610	2439	2439	8	4	171,3	C4	660	-	-	420	-	-
16,8 (55p)	610	2439	2439	16	4	196,9	C5	660	-	-	420	-	270
18,3 (60p)	914	3048	3048	16	4	166,42	C5	660	-	-	420	-	270
19,8 (65p)	914	3048	3048	16	4	199,07	C6	812	-	-	572	-	422
21,3 (70p)	914	3658	3658	16	4	171,32	C7	812	-	-	572	-	422
22,9 (75p)	914	3962	3962	16	4	176,92	C8	812	-	-	572	-	422
24,4 (80p)	914	4267	4267	16	4	181,37	C8	812	-	-	572	-	422

\* POUR LES TOURS AVEC CLÔTURE D'ACIER, LA DIMENSION MINIMALE DES FONDATIONS DE BÉTON EST DE 2439x2439xÉPAISSEUR REQUIS.

Revisión	Description	Par/By	Date
8	POUR CONSTRUCTION, RÉVISION 1	P.-C.G.	04-08-01
5	POUR CONSTRUCTION	P.-C.G.	04-05-31
4	DÉFINITIF	P.-C.G.	03-12-23
3	DÉFINITIF	P.-C.G.	03-11-19
2	DÉFINITIF - POUR APPROBATION	P.-C.G.	03-10-27
1	DÉFINITIF - POUR APPROBATION	P.-C.G.	03-07-25

A: Numéro du détail  
Detail no.  
B: Feuille sur laquelle le détail est référencé  
Location drawing no.  
C: Feuille sur laquelle le détail est dessiné  
Drawing no.

Toute modification doit être rapportée à:  
All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
SERVICES TECHNIQUES  
Systèmes électroniques et Informatiques  
Informations Techniques et Graphiques

Dossier:  
File:

TOURS D'ACIER À CLAIRE-VOIE  
HAUTEUR DE 3m (10p) @ 24,4m (80p)

FONDATIONS ET ANCRAGES  
OPTION "3"  
PLAN DE MONTAGE

Dessin:  
Drawing:

Conçu par:  
Designed by:  
BPR  
GROUPE CONSEIL  
P.-C. GAGNON, Ing. 2003/05/30

Dessiné par:  
Drawn by:  
BPR  
GROUPE CONSEIL  
ERIC GAGNON, tech. 2003/05/30

Vérifié par:  
Verified by:  
BPR  
GROUPE CONSEIL  
P.-C. GAGNON, Ing. 2003/05/30

Approuvé par:  
Approved by:

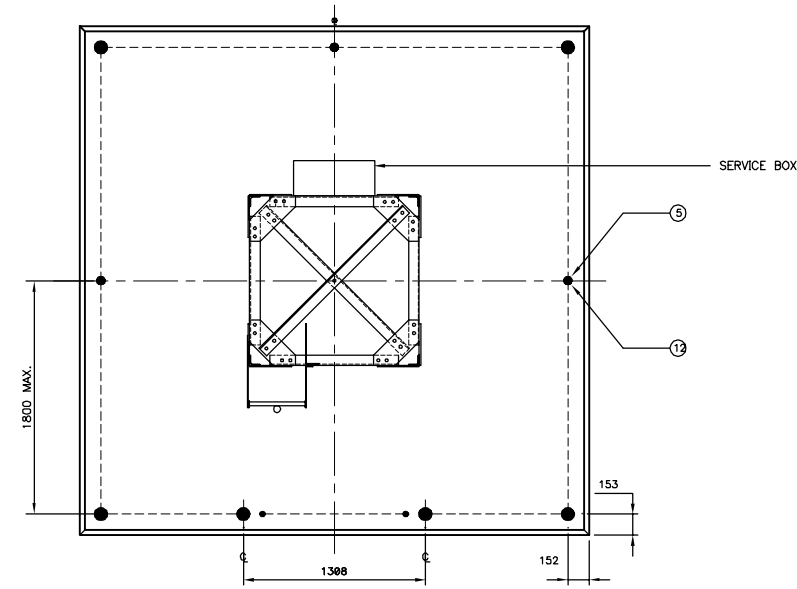
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File no.  
Échelle:  
Scale:  
INDIQUÉE

No. dessin:  
Drawing no.  
No. feuille:  
Sheet no.  
88733 19

Services techniques  
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 Informations techniques et graphiques  
 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7

**MATERIAL SPECIFICATION**

- ① HEIGHT OF FENCE ABOVE IS 2438mm.
- ② GRADE 9 STEEL WIRE MESH, GALVANIZED AFTER MESHING.  
UPPER END FINISH : SPIKING WIRES  
LOWER END FINISH : FOLDER WIRES
- ③ 2438mm CORNER POST, 89mm $\phi$
- ④ 2438 GATE POST, 89mm $\phi$  (2 REQUIRED)
- ⑤ 60mm $\phi$  MIDDLE POST
- ⑥ 1219mm WIRE MESH GATE WITH HARDWARE (2 REQUIRED)
- ⑦ 2438mm TENSION BAR
- ⑧ UPPER STRUT, 43mm $\phi$
- ⑨ GRADE 6 LOWER TENSION WIRE
- ⑩ MIDDLE STRUT FLANGE 89mm $\phi$
- ⑪ TENSION BAR FLANGE 89mm $\phi$
- ⑫ MIDDLE STRUT FLANGE 89mm $\phi$
- ⑬ STRUT END CAP
- ⑭ POST CAP 89mm $\phi$
- ⑮ WIRE TIES  $\phi$  229mm c/c

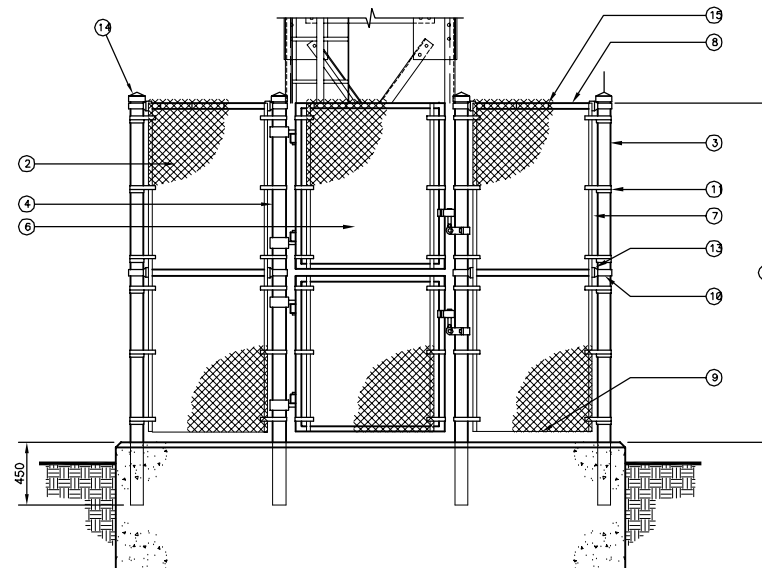


**PLAN VIEW**  
SCALE 1:25

**NOTE:**

ALL ELEMENT SHALL BE GALVANIZED AND MEET THE FOLLOWING STANDARDS :

- WIRE MESH : ASTM-A392-89
- BARS AND POSTS : ASTM-E32-86 (1991)
- BOLTS, NUTS & HARDWARE : ASTM-A153-82 (1987)



**ELEVATION**  
SCALE 1:25

3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-83

Révision	Description	Par/By	Date
A	Numéro du détail Detail no.		
B	Feuille sur laquelle le détail est référencé Location drawing no.		
C	Feuille sur laquelle le détail est dessiné Drawing no.		

Toute modification doit être rapportée à:  
 All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:

**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24,4m (80ft)

Dessin:  
 Drawing:

CHAIN LINK FENCE

Conçu par:  
 Designed by: **P.-C. GAGNON, Ing.** 2003/05/30

Dessiné par:  
 Drawn by: **ERIC GAGNON, tech.** 2003/05/30

Vérifié par:  
 Verified by: **P.-C. GAGNON, Ing.** 2003/05/30

Approuvé par:  
 Approved by:

No. dossier:  
 File no.:

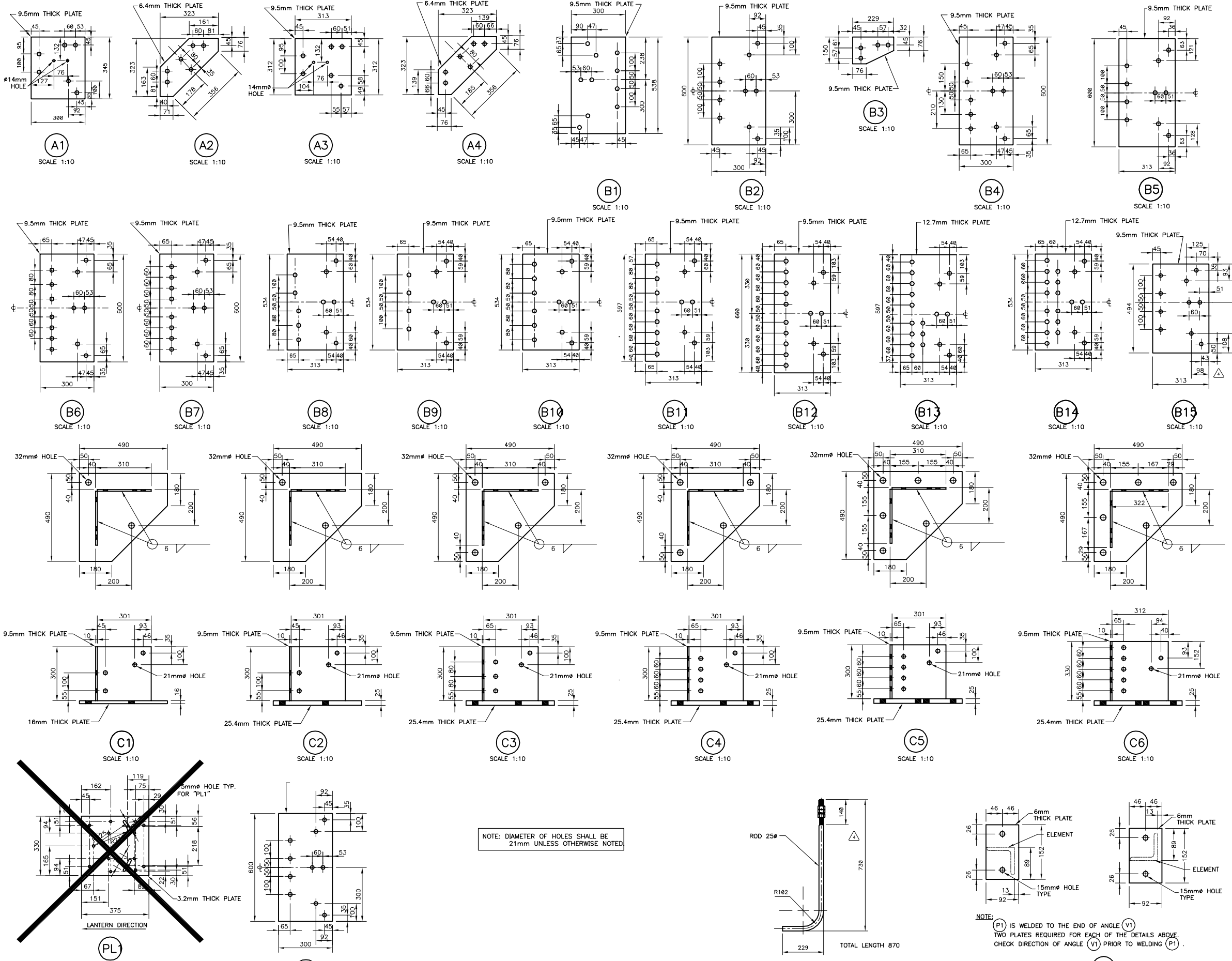
Échelle:  
 Scale:  
**INDICATED**

No. dessin:  
 Drawing no.:

08733 20



Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 191 Bout Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7



NOTE: DIAMETER OF HOLES SHALL BE 21mm UNLESS OTHERWISE NOTED

NOTE: P1 IS WELDED TO THE END OF ANGLE (V1)  
 TWO PLATES REQUIRED FOR EACH OF THE DETAILS ABOVE  
 CHECK DIRECTION OF ANGLE (V1) PRIOR TO WELDING (P1)

3	FOR CONSTRUCTION	P.-C.G.	04-05-31
2	DEFINITIVE	P.-C.G.	04-01-08
1	DEFINITIVE	P.-C.G.	03-12-23

Revision	Description	Par	Date
A	A: Numéro du détail Detail no.		
B	B: Feuille sur laquelle le détail est retiré Location drawing no.		
C	C: Feuille sur laquelle le détail est dessiné Drawing no.		

Toute modification doit être rapportée à:  
 all modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques  
 et Graphiques

Dossier:  
 File:

**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:

GUSSET, PLATES, TOWER  
 BEARING PLATES & ANCHOR BOLT.  
 SHOP DRAWINGS

Conçu par:  
 Designed by: **P.-C. GAGNON, Ing.** 2003/05/30

Dessiné par:  
 Drawn by: **ERIC GAGNON, tech.** 2003/05/30

Vérifié par:  
 Checked by: **P.-C. GAGNON, Ing.** 2003/05/30

Approuvé par:  
 Approved by:

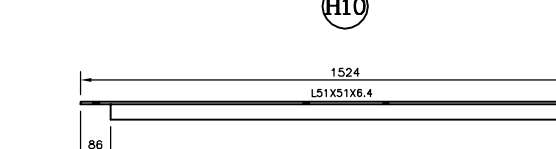
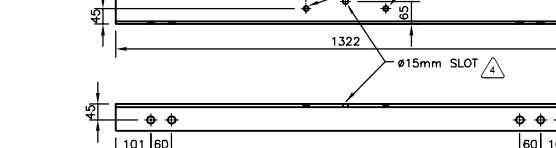
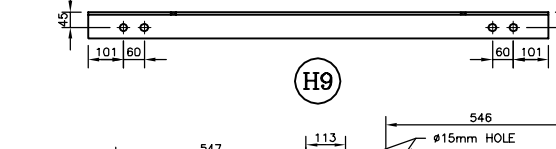
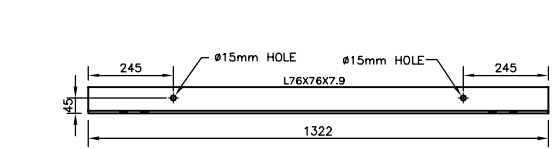
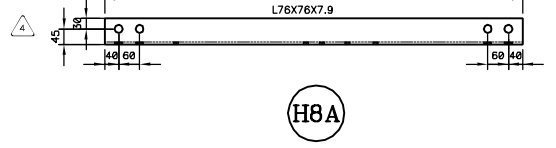
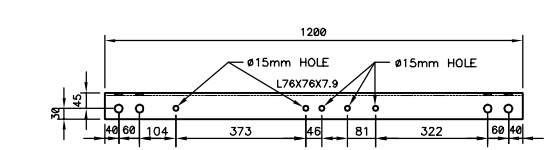
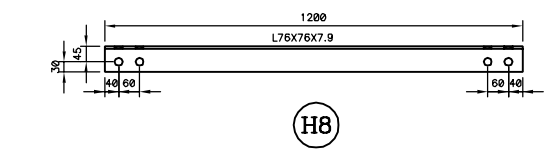
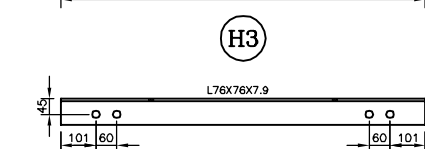
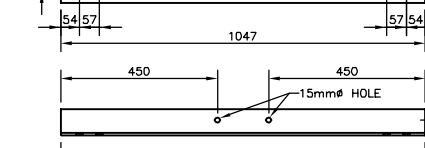
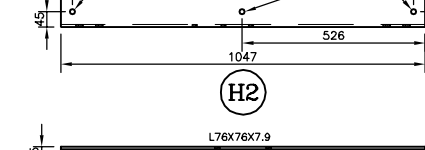
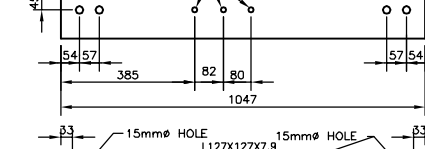
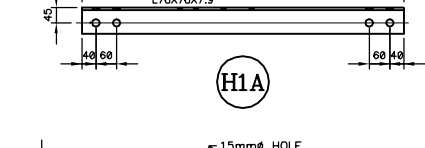
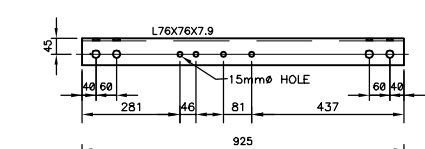
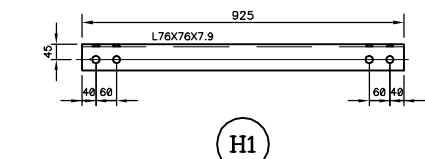
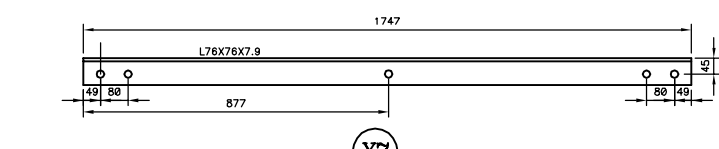
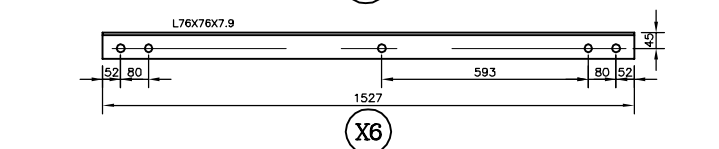
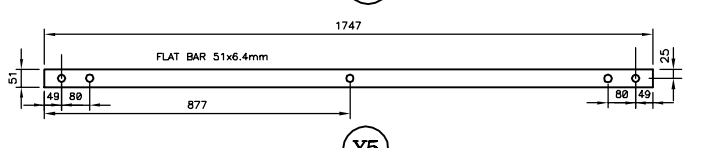
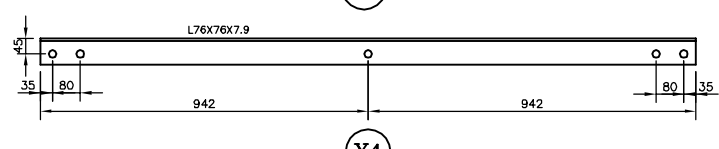
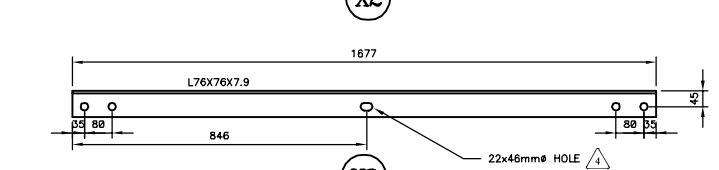
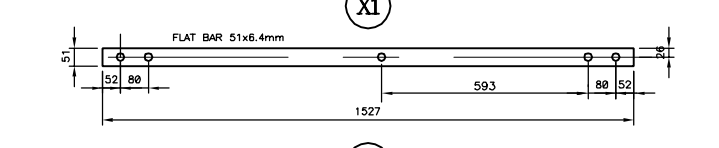
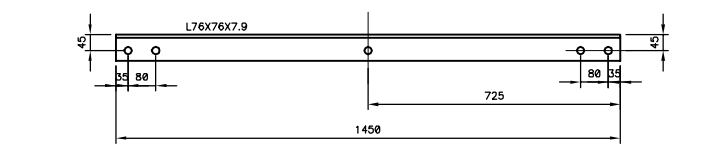
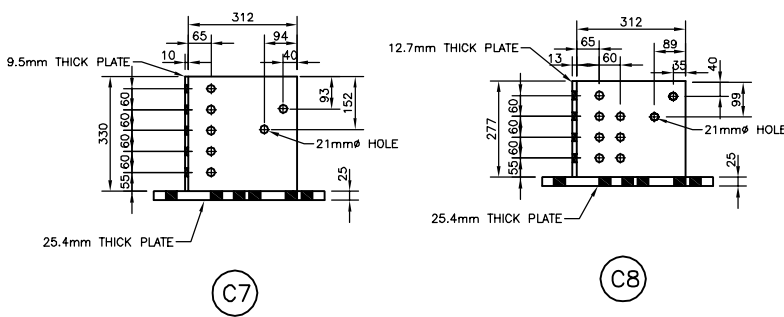
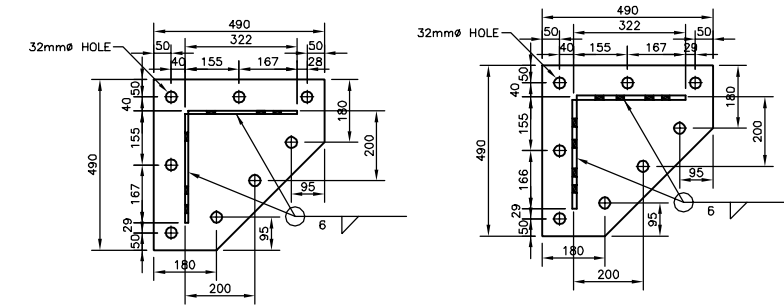
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 File no.: **INDICATED**

No. dessin:  
 Drawing no.: **08733**

Échelle:  
 Scale: **INDICATED**

No. feuille:  
 Sheet no.: **21**

Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 191 Bout Champlain (dépot 18)  
 Québec (Québec) G1K 7T7



NOTE: DIAMETER OF HOLES SHALL BE 21mm UNLESS OTHERWISE NOTED

3	X3, H8, H8A AND H13 DETAILS MODIFIED FOR CONSTRUCTION	L.T.S.	09-04-06
2	DEFINITIVE	P.-C.G.	04-05-31
1	DEFINITIVE	P.-C.G.	04-01-08
		P.-C.G.	03-12-23

A	A: Numéro du détail / Detail no.	A
B	B: Feuille sur laquelle le détail est tiré / Location drawing no.	B
C	C: Feuille sur laquelle le détail est dessiné / Drawing no.	C

Toute modification doit être rapportée à / All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier: / File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin: / Drawing:  
 VERTICAL, HORIZONTAL & DIAGONAL STRUCTURAL MEMBERS SHOP DRAWINGS

Conçu par: / Designed by: **P.-C. GAGNON, Ing. 2003/05/30**

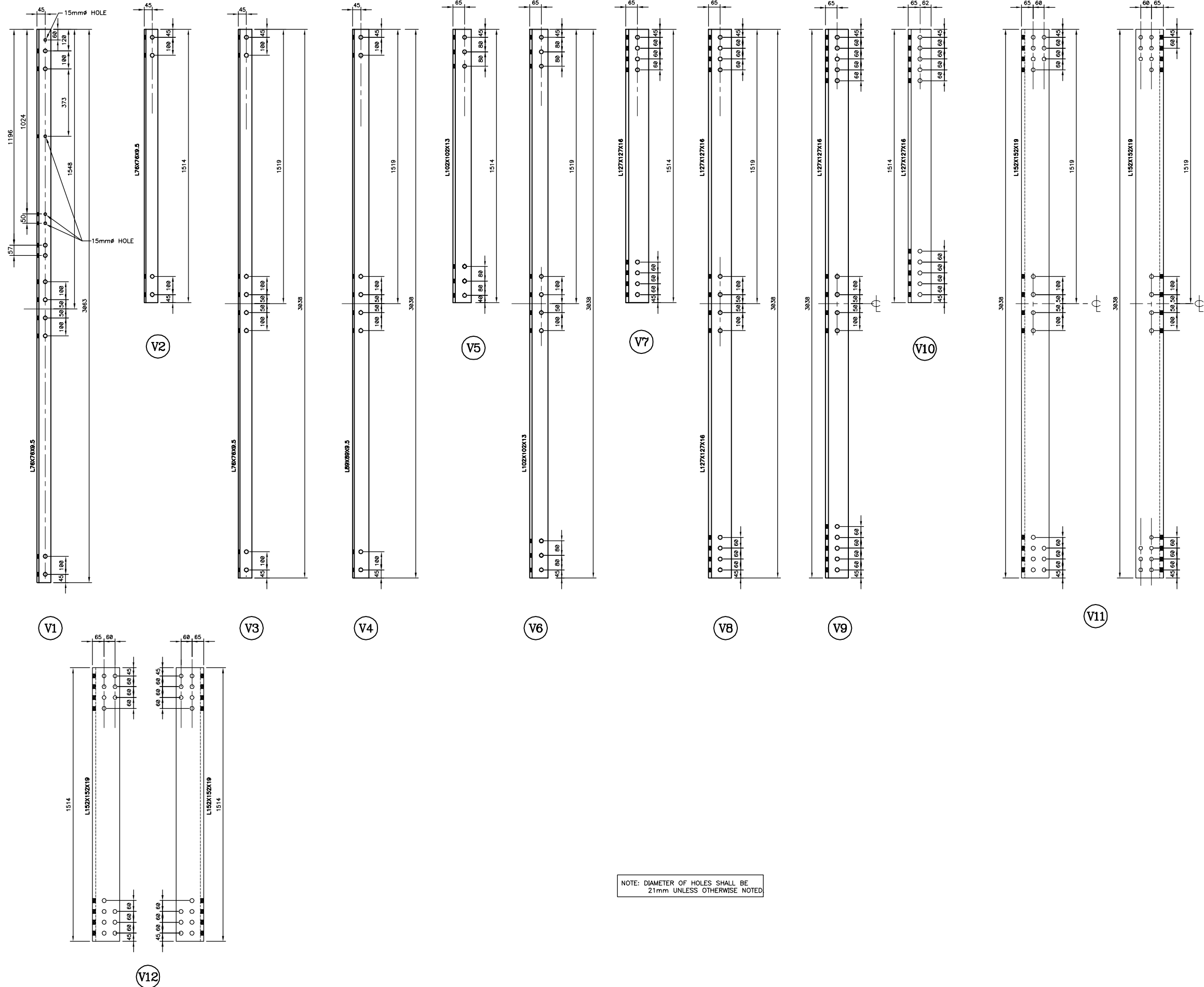
Dessiné par: / Drawn by: **ERIC GAGNON, tech. 2003/05/30**

Vérifié par: / Verified by: **P.-C. GAGNON, Ing. 2003/05/30**

Approuvé par: / Approved by:

No. dossier: / File no.:  
 No. dessin: / Drawing no.:

Echelle: / Scale: **INDICATED**  
 No. feuille: / Sheet no.:  
 08733 22



Services techniques  
Systèmes électroniques et informatiques  
Informations techniques et graphiques  
101 Boul. Champlain (dépt 18)  
Québec (Québec) G1K 7Y7

3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-23

Révision	Description	Par/By	Date
A	A: Numéro du détail Detail no.		
B	B: Feuille sur laquelle le détail est référencé Location drawing no.		
C	C: Feuille sur laquelle le détail est dessiné Drawing no.		

Toute modification doit être rapportée à:  
All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
SERVICES TECHNIQUES  
Systèmes électroniques et informatiques  
Informations Techniques et Graphiques

Dossier:  
File:

**LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
Drawing:

**VERTICAL STRUCTURAL MEMBERS  
SHOP DRAWINGS**

Conçu par:  
Designed by: **P.-C. GAGNON, Ing.** 2003/05/30

Dessiné par:  
Drawn by: **ERIC GAGNON, tech.** 2003/05/30

Vérifié par:  
Verified by: **P.-C. GAGNON, Ing.** 2003/05/30

Approuvé par:  
Approved by:

No. dossier:  
File no.:

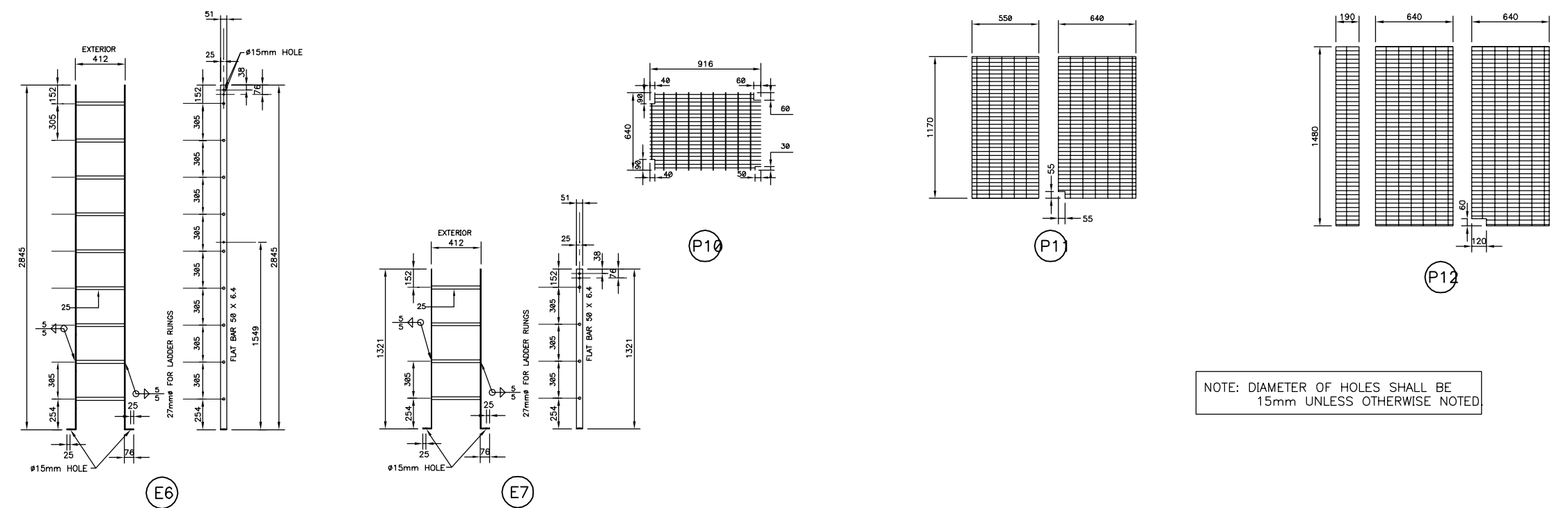
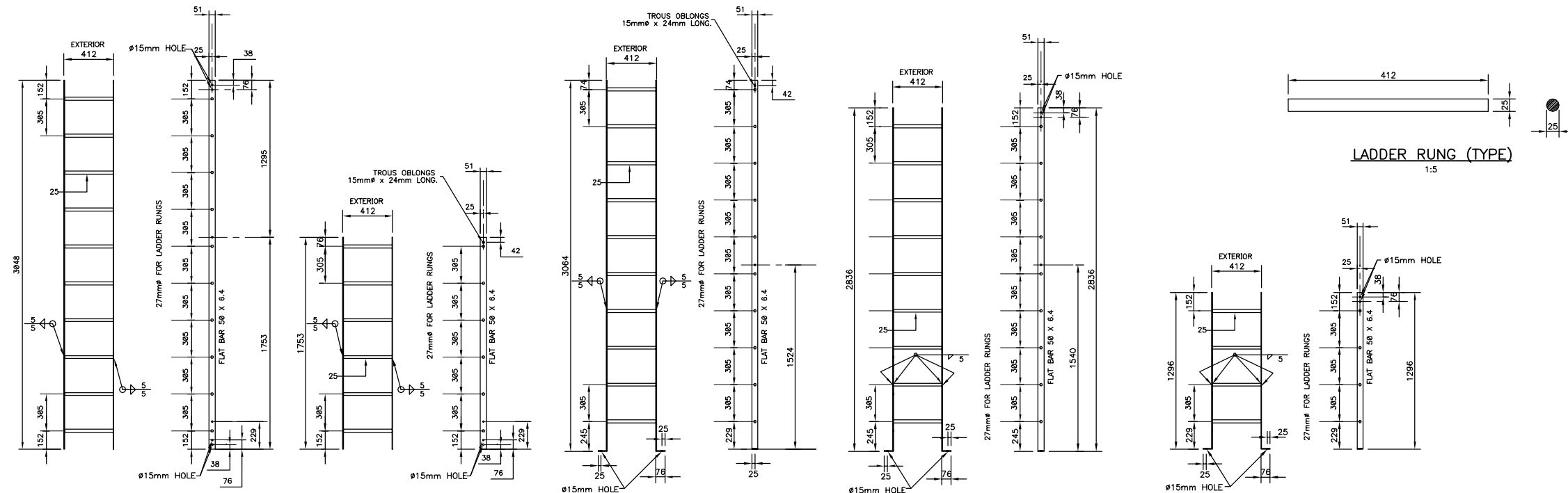
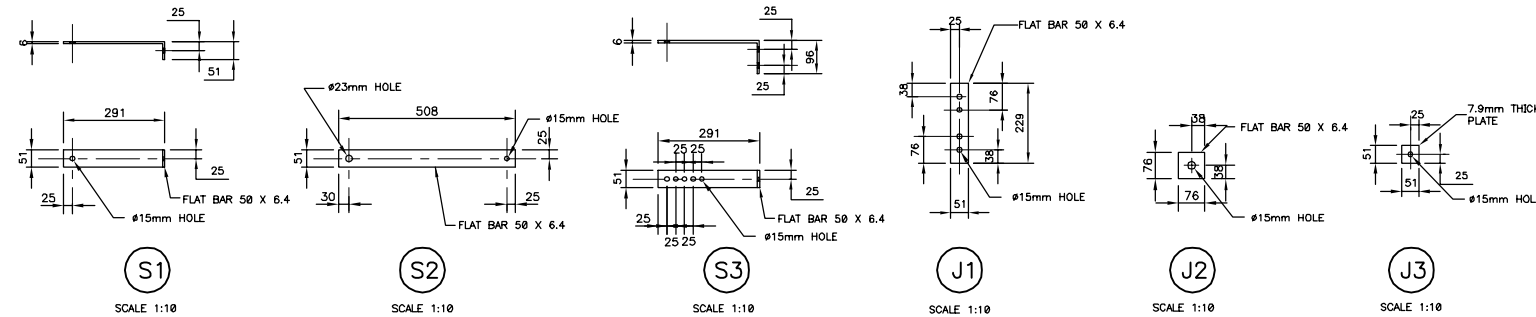
Échelle:  
Scale: **1 : 10**

No. dessin:  
Drawing no.:

80733



Services techniques  
Systèmes électroniques et informatiques  
Informations techniques et graphiques  
101 Blvd. Champlain (dépot 18)  
Québec (Québec) G1K 7Y7



NOTE: DIAMETER OF HOLES SHALL BE 15mm UNLESS OTHERWISE NOTED

3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-83

Révision	Description	Par/By	Date
A	A: Numéro du détail Detail no.		
B	B: Feuille sur laquelle le détail est référencé Location drawing no.		
C	C: Feuille sur laquelle le détail est dessiné Drawing no.		

Toute modification doit être rapportée à:  
All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
SERVICES TECHNIQUES  
Systèmes électroniques et informatiques  
Informations Techniques et Graphiques

Dossier:  
File:

**LATTICED STEEL TOWERS**  
HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
Drawing:

LADDERS AND GRATING  
SHOP DRAWINGS

Conçu par:  
Designed by: **P-C. GAGNON Ing. 2003-05-30**

Dessiné par:  
Drawn by: **ERIC GAGNON tech. 2003-05-30**

Vérifié par:  
Verified by: **P-C. GAGNON Ing. 2003-05-30**

Approuvé par:  
Approved by:

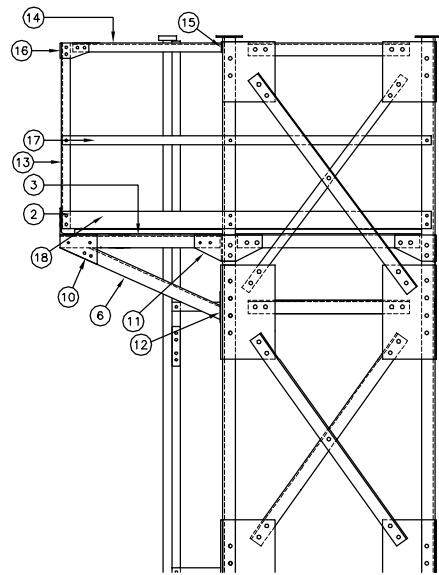
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Échelle:  
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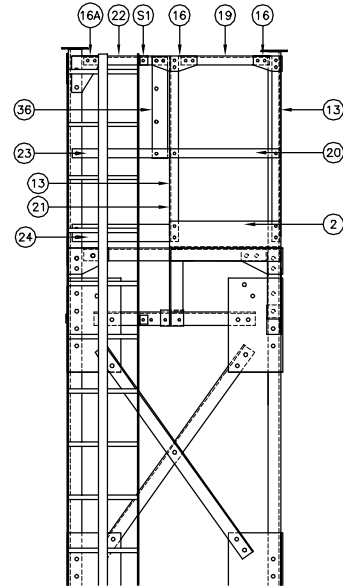
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Drawing no.:

88733 **24**

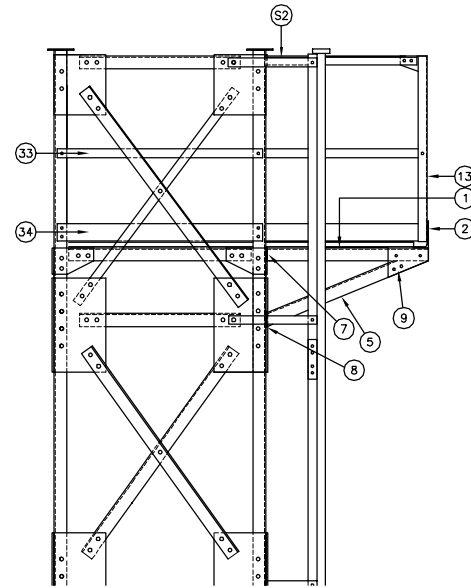
Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7



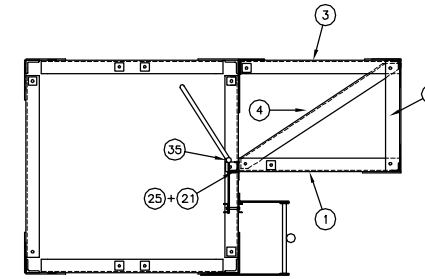
RIGHT ELEVATION  
 SCALE 1:20



FRONT ELEVATION  
 SCALE 1:20



LEFT ELEVATION  
 SCALE 1:20



PLAN VIEW  
 SCALE 1:20

UPPER DECK AND RAILING FOR 1219x1219 TOWERS  
 SCALE 1:20

MATERIAL LIST					
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY	WEIGHT (kg)
1	L 76 X 76 X 7.9 X 928 lg	350 MPa	08733-26	1	8.4
2	L 152 X 102 X 7.9 X 640 lg	350 MPa	08733-26	1	9.8
3	L 76 X 76 X 7.9 X 918 lg	350 MPa	08733-26	1	8.3
4	L 76 X 76 X 7.9 X 1099 lg	350 MPa	08733-26	1	9.1
5	L 76 X 76 X 7.9 X 1002 lg	350 MPa	08733-26	1	9.0
6	L 76 X 76 X 7.9 X 1007 lg	350 MPa	08733-26	1	9.0
7	PL 130 X 80 X 6.4	350 MPa	08733-26	1	0.5
8	PL 131 X 95 X 6.4	350 MPa	08733-26	1	0.6
9	PL 234 X 170 X 6.4	350 MPa	08733-26	1	1.4
10	PL 212 X 170 X 6.4	350 MPa	08733-26	1	1.3
11	PL 389 X 150 X 6.4	350 MPa	08733-26	1	2.4
12	PL 177 X 88 X 6.4	350 MPa	08733-26	1	0.8
13	L 51 X 51 X 6.4 X 1069 lg	350 MPa	08733-21	2	10.1
14	L 51 X 51 X 6.4 X 852 lg	350 MPa	08733-26	1	4.0
15	PL 76 X 61 X 6.4	350 MPa	08733-26	1	0.2
16	PL 155 X 90 X 6.4	350 MPa	08733-26	4	2.8
16A	PL 155 X 90 X 6.4	350 MPa	08733-26	1	1.3
17	PL 212 X 51 X 6.4	350 MPa	08733-26	1	5.4
18	PL 212 X 100 X 6.4	350 MPa	08733-26	1	10.7
19	L 51 X 51 X 6.4 X 504 lg	350 MPa	08733-26	1	2.4
20	PL 51 X 634 X 6.4	350 MPa	08733-24	1	1.6
21	L 51 X 51 X 6.4 X 1095 lg	350 MPa	08733-24	1	5.2
22	L 51 X 51 X 6.4 X 484 lg	350 MPa	08733-24	1	2.3
23	PL 51 X 612 X 6.4	350 MPa	08733-24	1	1.8
24	PL 100 X 612 X 6.4	350 MPa	08733-24	1	3.1
25	PL 56 X 73 X 6.4	350 MPa	08733-24	1	0.2
26	PL 100 X 917 X 6.4	350 MPa	08733-24	1	4.6
27	PL 51 X 917 X 6.4	350 MPa	08733-24	1	2.3
28	L 51 X 51 X 6.4 X 787 lg	350 MPa	08733-24	1	3.9
29	PL 100 X 2427 X 6.4	350 MPa	08733-24	1	12.2
30	PL 51 X 2427 X 6.4	350 MPa	08733-24	1	6.2
31	PL 51 X 1484 X 6.4	350 MPa	08733-24	2	7.6
32	PL 100 X 1484 X 6.4	350 MPa	08733-24	2	15
33	PL 51 X 1179 X 6.4	350 MPa	08733-24	2	6.0
34	PL 100 X 1179 X 6.4	350 MPa	08733-24	2	11.8
35	"CUTTERMAN CO. SELF-CLOSING GATE" MODEL #AG1626Z	-	-	1	-
36	PL 88 X 585 X 9.5	350 MPa	08733-24	1	3.9
TOTAL				1219 x 1219 TOWERS (G1)	133.2
				1519 X 1519 TOWERS (G2)	155.1
BLB	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	66	S/O

3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	A: Numéro du détail		
B	B: Feuille sur laquelle le détail est référencé		
C	C: Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
**UPPER DECK AND RAILING**  
**ERECTING PLAN**

Conçu par:  
 Designed by:  
**P-C.GAGNON, Ing. 2003/05/30**

Dessiné par:  
 Drawn by:  
**ERIC GAGNON, tech. 2003/05/30**

Vérifié par:  
 Verified by:  
**P-C.GAGNON, Ing. 2003/05/30**

Approuvé par:  
 Approved by:

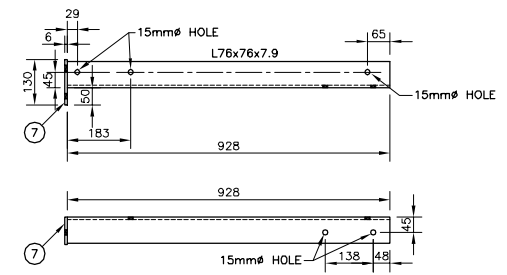
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 File no.:

No. dessin:  
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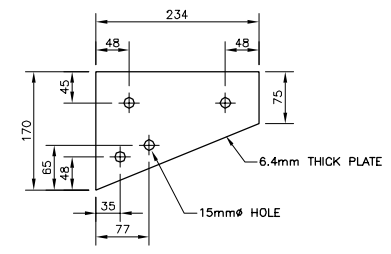
Échelle:  
 Scale:  
**INDICATED**

No. dossier:  
 File no.: 08733  
 No. dessin:  
 Drawing no.: 25

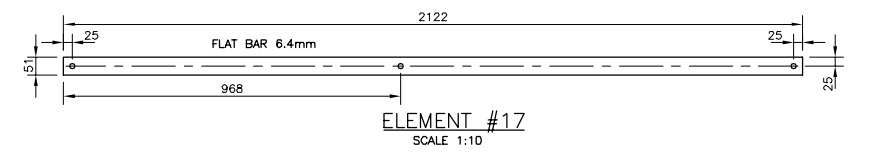
Services techniques / Systems électroniques et informatiques / Informations techniques et graphiques  
 101 Boul. Champlain (dépt 18) / Québec (Québec) G1K 7Y7



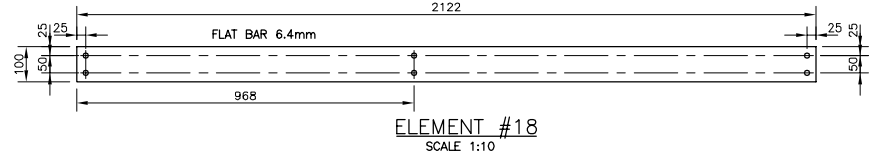
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SCALE 1:10



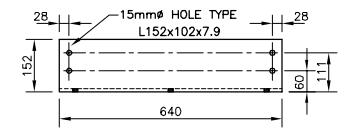
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SCALE 1:5



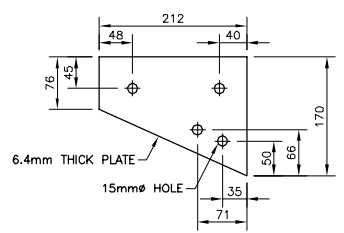
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SCALE 1:10



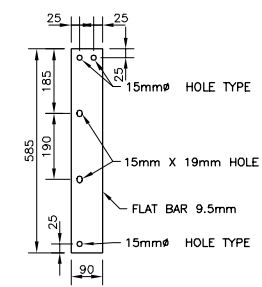
ELEMANT #18  
SCALE 1:10



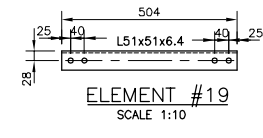
ELEMANT #2  
SCALE 1:10



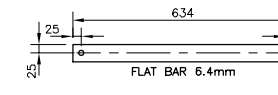
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SCALE 1:5



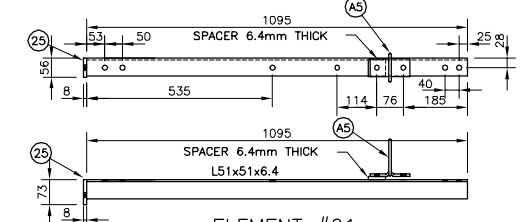
ELEMANT #36  
SCALE 1:10



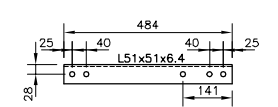
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SCALE 1:10



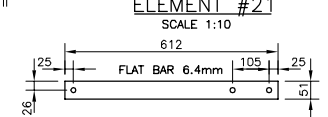
ELEMANT #20  
SCALE 1:10



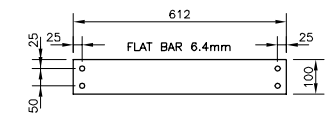
ELEMANT #21  
SCALE 1:10



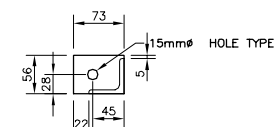
ELEMANT #22  
SCALE 1:10



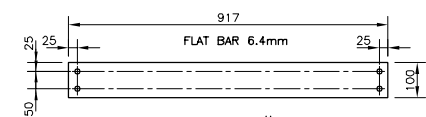
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SCALE 1:10



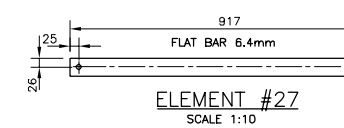
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SCALE 1:10



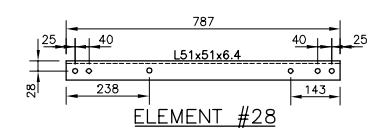
ELEMANT #25  
SCALE 1:5



ELEMANT #26  
SCALE 1:10

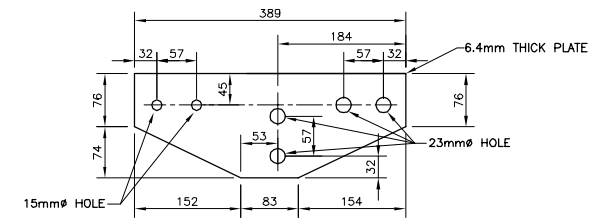


ELEMANT #27  
SCALE 1:10

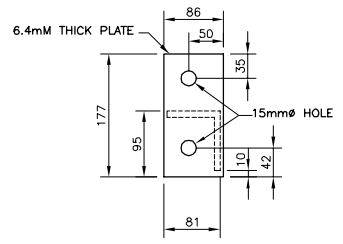


ELEMANT #28  
SCALE 1:10

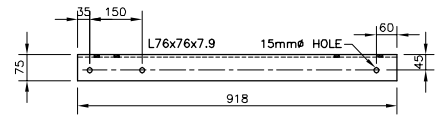
NOTE: DIAMETER OF HOLES SHALL BE 15mm UNLESS OTHERWISE NOTED



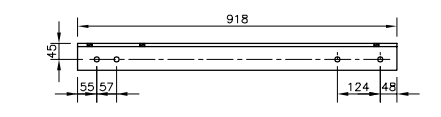
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SCALE 1:5



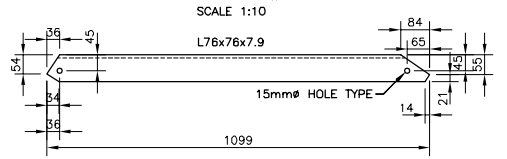
ELEMANT #12  
SCALE 1:5



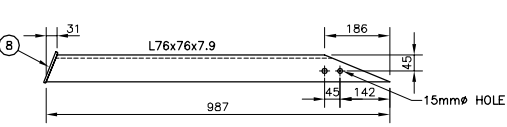
ELEMANT #3  
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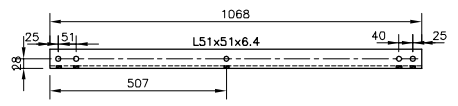
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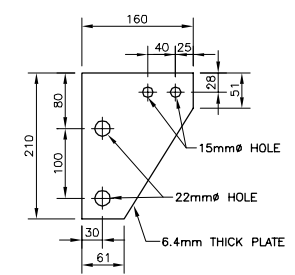
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SCALE 1:10



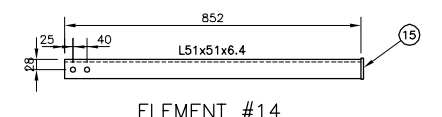
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SCALE 1:10



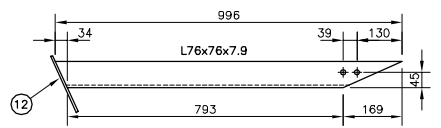
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SCALE 1:10



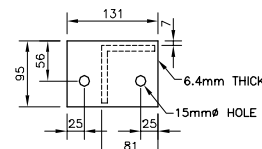
ELEMANT #16-A  
SCALE 1:10



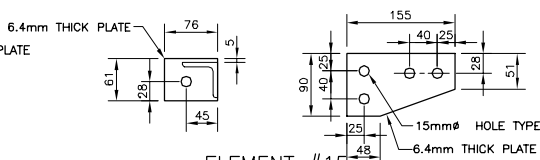
ELEMANT #14  
SCALE 1:10



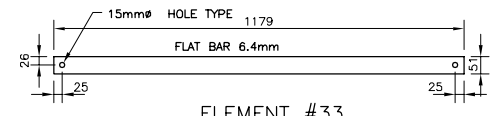
ELEMANT #7  
SCALE 1:5



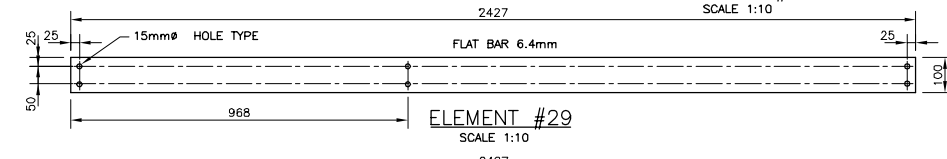
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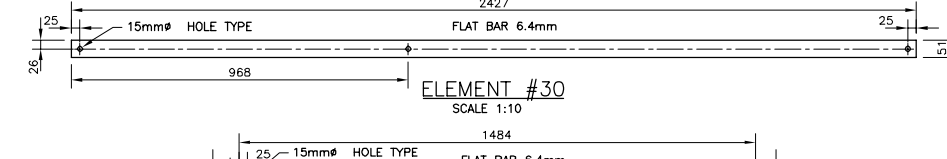
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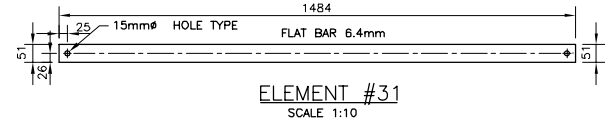
ELEMANT #16  
SCALE 1:5



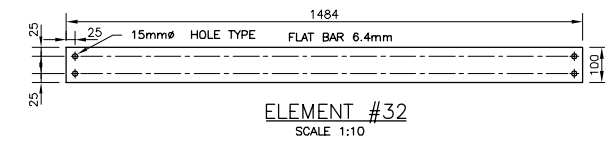
ELEMANT #29  
SCALE 1:10



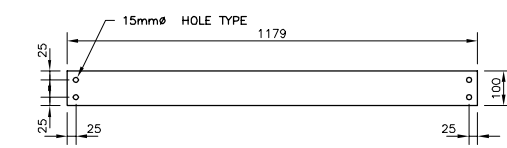
ELEMANT #30  
SCALE 1:10



ELEMANT #31  
SCALE 1:10



ELEMANT #32  
SCALE 1:10



ELEMANT #34  
SCALE 1:10

3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-23

Révision	Description	Par/By	Date
A	Numéro du détail / Detail no.	A	C
B	Feuille sur laquelle le détail est référencé / Location drawing no.	B	C
C	Feuille sur laquelle le détail est dessiné / Drawing no.	C	C

Toute modification doit être rapportée à: / All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE / SERVICES TECHNIQUES / Systèmes électroniques et informatiques / Informations Techniques et Graphiques

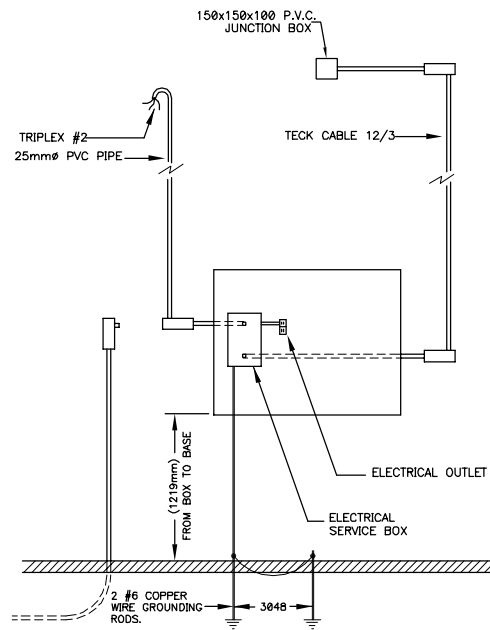
Dossier: / File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin: / Drawing:  
 UPPER DECK PARTS / SHOP DRAWINGS

Conçu par: / Designed by:	P-C.GAGNON, Ing.	Date: 2003/05/30
Dessiné par: / Drawn by:	ERIC GAGNON, ISCALE	Date: 2003/05/30
Vérifié par: / Verified by:	P-C.GAGNON, Ing.	Date: 2003/05/30
Approuvé par: / Approved by:		Date:

No. dossier: / File no.:	08733	Échelle: / Scale:	INDICATED
No. dessin: / Drawing no.:	08733	No. feuille: / Sheet no.:	28

Services techniques et Informatiques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7



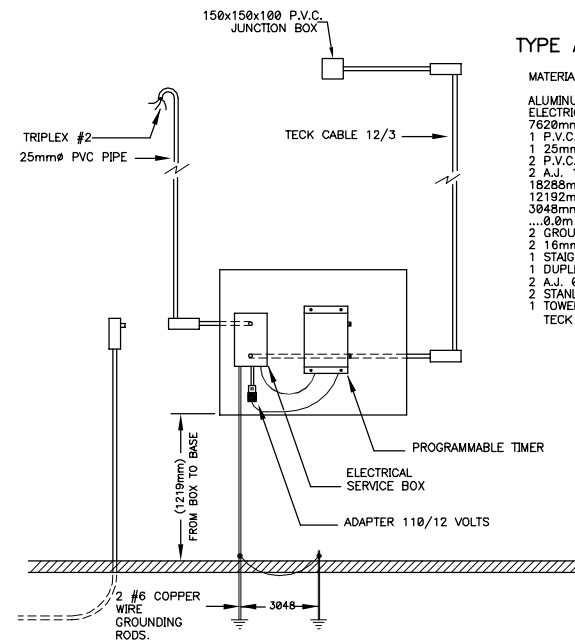
**TYPE A**

**MATERIAL LIST**

- ALUMINUM SERVICE BOX (SEE DRAWING # 08733-32)
- ELECTRICAL SWITCH 30A ITE NRH-321 OR EQUIVALENT
- 7620mm, 25mmø P.V.C., PIPE
- 1 P.V.C., "F", 25mmø CONDULET
- 1 25mmø, P.V.C., MALE CONNECTOR
- 2 P.V.C. L.B. 25mmø CONDULETS
- 2 A.J. 1.00 RIGID PIPE FASTENING DEVICE
- 18288mm BLACK, RW90 TYPE, #8 WIRE
- 12192mm WHITE, RW90 TYPE, #8 WIRE
- 3048mm COPPER NEUTRAL WIRE
- ...0.80m BLACK AND WHITE, TEW TYPE, #14 WIRE
- 2 GROUND ROD, H.D. TYPE, CONNECTORS
- 2 16mmø x 2438mm LONG GROUND ROD
- 1 STRAIGHT BLADE RECEPTACLE
- 1 DUPLEX STRAIGHT BLADE RECEPTACLE AND STANLESS STEEL WALL PLATES
- 2 A.J. 05-0.75 RIGID PIPE FASTENING DEVICE
- 2 STANLESS STEEL PIPE FASTENING DEVICE
- 1 TOWER TRIPLEX FASTENING DEVICE
- TECK CABLE 12/3

110 VOLTS (12 VOLTS DC) RANGE LIGHT POWERED BY HYDRO-QUEBEC

DIAGRAM TYPE "A"



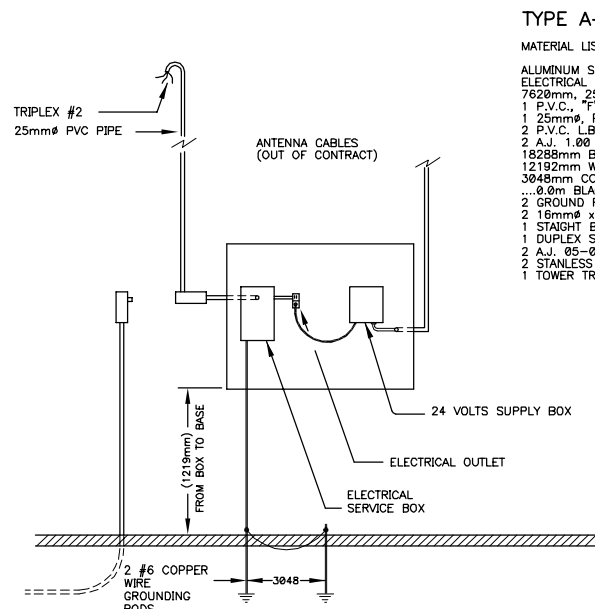
**TYPE A-1**

**MATERIAL LIST**

- ALUMINUM SERVICE BOX (SEE DRAWING # 08733-32)
- ELECTRICAL SWITCH 30A ITE NRH-321 OR EQUIVALENT
- 7620mm, 25mmø P.V.C., PIPE
- 1 P.V.C., "F", 25mmø CONDULET
- 1 25mmø, P.V.C., MALE CONNECTOR
- 2 P.V.C. L.B. 25mmø CONDULETS
- 2 A.J. 1.00 RIGID PIPE FASTENING DEVICE
- 18288mm BLACK, RW90 TYPE, #8 WIRE
- 12192mm WHITE, RW90 TYPE, #8 WIRE
- 3048mm COPPER NEUTRAL WIRE
- ...0.80m BLACK AND WHITE, TEW TYPE, #14 WIRE
- 2 GROUND ROD, H.D. TYPE, CONNECTORS
- 2 16mmø x 2438mm LONG GROUND ROD
- 1 STRAIGHT BLADE RECEPTACLE
- 1 DUPLEX STRAIGHT BLADE RECEPTACLE AND STANLESS STEEL WALL PLATES
- 2 A.J. 05-0.75 RIGID PIPE FASTENING DEVICE
- 2 STANLESS STEEL PIPE FASTENING DEVICE
- 1 TOWER TRIPLEX FASTENING DEVICE
- TECK CABLE 12/3

110 VOLTS (12 VOLTS D.C.) RANGE LIGHT WITH PROGRAMMABLE TIMER POWERED BY HYDRO-QUEBEC

DIAGRAM TYPE "A-1"



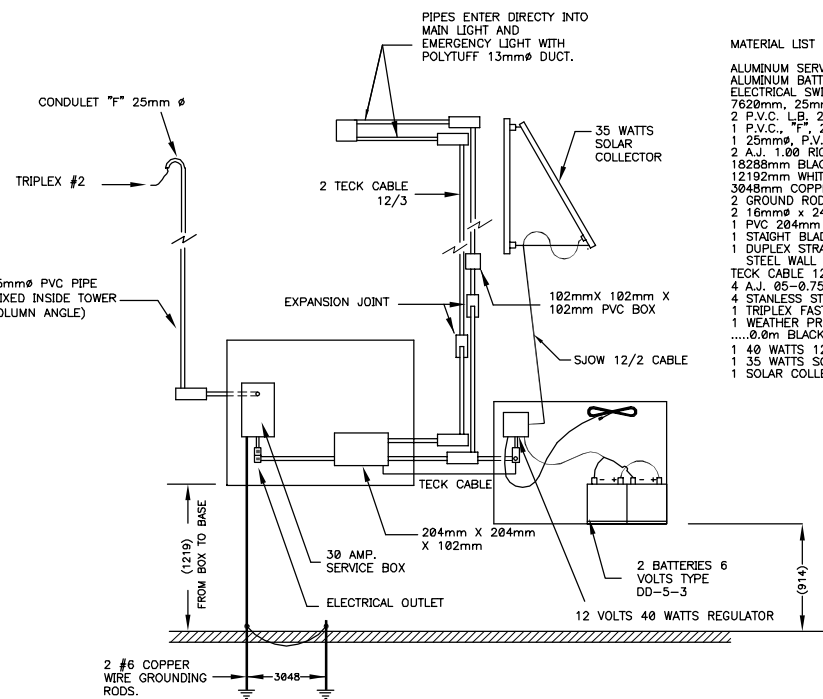
**TYPE A-2**

**MATERIAL LIST**

- ALUMINUM SERVICE BOX (SEE DRAWING # 08733-32)
- ELECTRICAL SWITCH 30A ITE NRH-321 OR EQUIVALENT
- 7620mm, 25mmø P.V.C., PIPE
- 1 P.V.C., "F", 25mmø CONDULET
- 1 25mmø, P.V.C., MALE CONNECTOR
- 2 P.V.C. L.B. 25mmø CONDULETS
- 2 A.J. 1.00 RIGID PIPE FASTENING DEVICE
- 18288mm BLACK, RW90 TYPE, #8 WIRE
- 12192mm WHITE, RW90 TYPE, #8 WIRE
- 3048mm COPPER NEUTRAL WIRE
- ...0.80m BLACK AND WHITE, TEW TYPE, #14 WIRE
- 2 GROUND ROD, H.D. TYPE, CONNECTORS
- 2 16mmø x 2438mm LONG GROUND ROD
- 1 STRAIGHT BLADE RECEPTACLE
- 1 DUPLEX STRAIGHT BLADE RECEPTACLE AND STANLESS STEEL WALL PLATES
- 2 A.J. 05-0.75 RIGID PIPE FASTENING DEVICE
- 2 STANLESS STEEL PIPE FASTENING DEVICE
- 1 TOWER TRIPLEX FASTENING DEVICE

BEACON LIGHT (24 VOLTS DC) POWERED BY HYDRO-QUEBEC

DIAGRAM TYPE "A-2"



**MATERIAL LIST**

- ALUMINUM SERVICE BOX (SEE DRAWING # 08733-32)
- ALUMINUM BATTERY BOX (SEE DRAWING # 08733-31)
- ELECTRICAL SWITCH 30A ITE NRH-321 OR EQUIVALENT
- 7620mm, 25mmø P.V.C., PIPE
- 2 P.V.C. L.B. 25mmø CONDULETS
- 1 P.V.C., "F", 25mmø CONDULET
- 1 25mmø, P.V.C., MALE CONNECTOR
- 2 A.J. 1.00 RIGID PIPE FASTENING DEVICE
- 18288mm BLACK, RW90 TYPE, #8 WIRE
- 12192mm WHITE, RW90 TYPE, #8 WIRE
- 3048mm COPPER NEUTRAL WIRE
- 2 GROUND ROD, H.D. TYPE, CONNECTORS
- 2 16mmø x 2438mm LONG GROUND ROD
- 1 PVC 204mm X 204mm X 102mm BOX
- 1 STRAIGHT BLADE RECEPTACLE
- 1 DUPLEX STRAIGHT BLADE RECEPTACLE AND STANLESS STEEL WALL PLATES
- TECK CABLE 12/3, 2 INDEPENDENTS LINES
- 4 A.J. 05-0.75 RIGID PIPE FASTENING DEVICE
- 4 STANLESS STEEL PIPE FASTENING DEVICE
- 1 TRIPLEX FASTENING DEVICE ON TOWER
- 1 WEATHER PROOF OUTLET TYPE RUSSEL-STONE #447
- ...0.80m BLACK, WHITE, RED, TEW 90, #14 WIRE
- 1 40 WATTS 12 VOLTS REGULATOR
- 1 35 WATTS SOLAR COLLECTOR
- 1 SOLAR COLLECTOR SUPPORT

RL 355 RANGE LANTERN AND 12 VOLTS EMERGENCY LIGHT

DIAGRAM TYPE "C-1"

3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-83

Révision	Description	Par/By	Date
A	A: Numéro du détail Detail no.		
B	B: Feuille sur laquelle le détail est référencé Location drawing no.		
C	C: Feuille sur laquelle le détail est dessiné Drawing no.		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Informatiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessiné par:  
 Drawn by:  
**TYPE "A" AND "C" BEACON LIGHT ELECTRICAL INSTALLATION DIAGRAMS**

Conçu par:  
 Designed by:  
**CANADIAN COAST GUARD**

Dessiné par:  
 Drawn by:  
**CANADIAN COAST GUARD**

Vérifié par:  
 Verified by:  
**CANADIAN COAST GUARD**

Approuvé par:  
 Approved by:

No. dossier:  
 File no.:

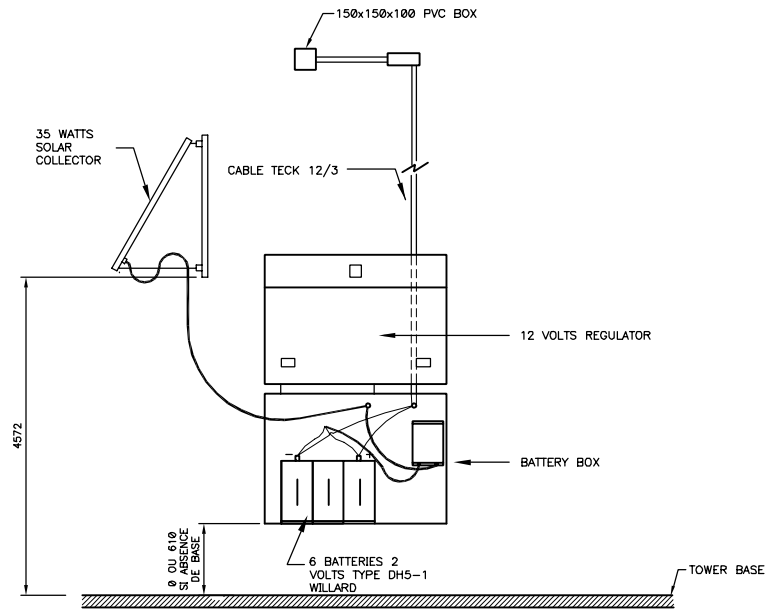
Échelle:  
 Scale:  
**N.T.S.**

No. dessin:  
 Drawing no.:

88733

27

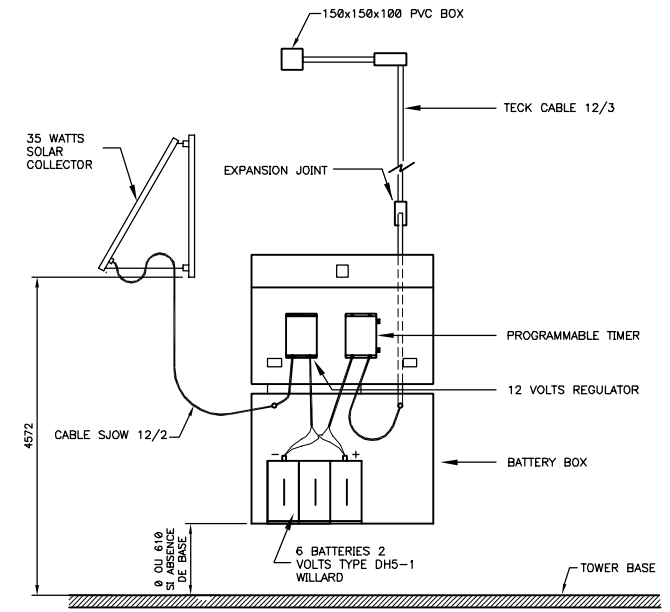
Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Blvd. Champlain (dépot 18)  
 Québec (Québec) G1K 7Y7



12 VOLTS LANTERN WITH SOLAR COLLECTOR

SCHÉMA TYPE "E"

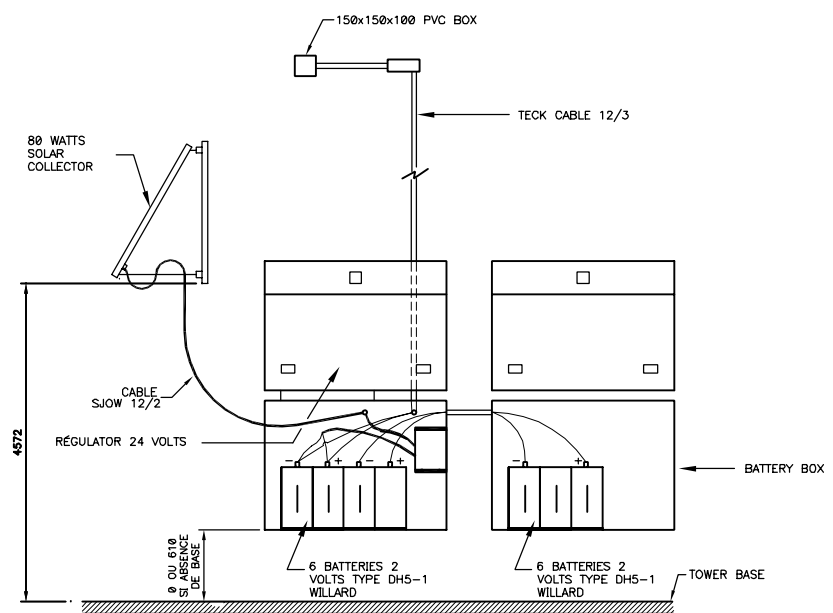
**TYPE E**  
 MATERIAL LIST  
 ALUMINUM BATTERY BOX (SEE DRAWING # 08733-31)  
 6 BATTERIES DH5-1  
 1 40 WATTS 12 VOLTS REGULATOR  
 1 35 WATTS SOLAR COLLECTOR  
 1 SOLAR COLLECTOR SUPPORT  
 2 A.J. Ø5-Ø75 RIGID PIPE FASTENING DEVICE  
 2 STAINLESS STEEL PIPE FASTENING DEVICE  
 CABLE TECK 12/3



12 VOLTS LANTERN WITH SOLAR COLLECTOR AND PROGRAMMABLE TIMER

SCHÉMA TYPE "E-1"

**TYPE E-1**  
 MATERIAL LIST  
 ALUMINUM BATTERY BOX (SEE DRAWING # 08733-31)  
 6 BATTERIES DH5-1  
 1 40 WATTS 12 VOLTS REGULATOR  
 1 35 WATTS SOLAR COLLECTOR  
 1 SOLAR COLLECTOR SUPPORT  
 2 A.J. Ø5-Ø75 RIGID PIPE FASTENING DEVICE  
 2 STAINLESS STEEL PIPE FASTENING DEVICE  
 CABLE TECK 12/3



BALISE (24 VOLTS DC) AVEC CAPTEUR SOLAIRE

SCHÉMA TYPE "F"

**TYPE F**  
 MATERIAL LIST  
 2 ALUMINUM BATTERY BOX (SEE DRAWING # 08733-31)  
 12 BATTERIES DH5-1  
 1 80 WATTS 12 VOLTS REGULATOR  
 1 80 WATTS SOLAR COLLECTOR  
 1 SOLAR COLLECTOR SUPPORT  
 2 A.J. Ø5-Ø75 RIGID PIPE FASTENING DEVICE  
 2 STAINLESS STEEL PIPE FASTENING DEVICE  
 CABLE TECK 12/3

3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-83

Révision	Description	Par/By	Date
A	Numéro du détail Detail no.	A	C
B	Feuille sur laquelle le détail est référencé Location drawing no.	B	C
C	Feuille sur laquelle le détail est dessiné Drawing no.	C	B

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24,4m (80ft)

Dessin:  
 Drawing:  
 TYPE "E-F" BEACON LIGHT  
 WITH SOLAR COLLECTOR

Conçu par:  
 Designed by:  
**CANADIAN COAST GUARD**

Dessiné par:  
 Drawn by:  
**CANADIAN COAST GUARD**

Vérifié par:  
 Verified by:  
**CANADIAN COAST GUARD**

Approuvé par:  
 Approved by:

No. dossier:  
 File no.:

No. dessin:  
 Drawing no.:

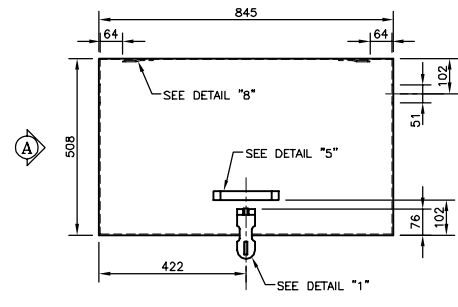
Échelle:  
 Scale:  
**N.T.S.**

8733  
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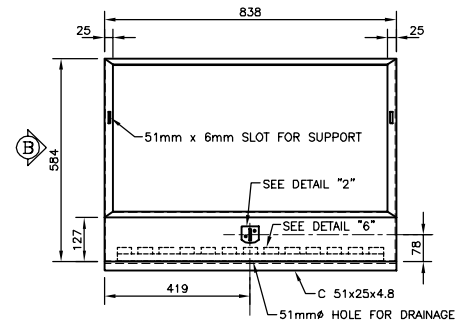


Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7

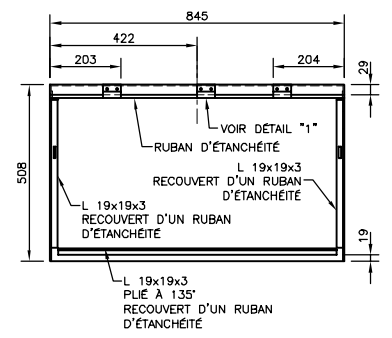
08733-29



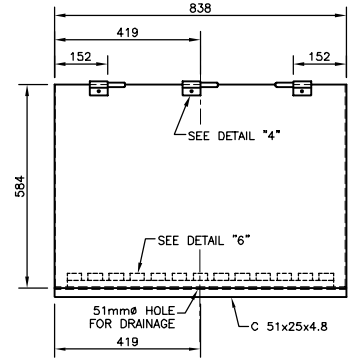
**BOX COVER**  
 SCALE 1:10  
 FRONT ELEVATION



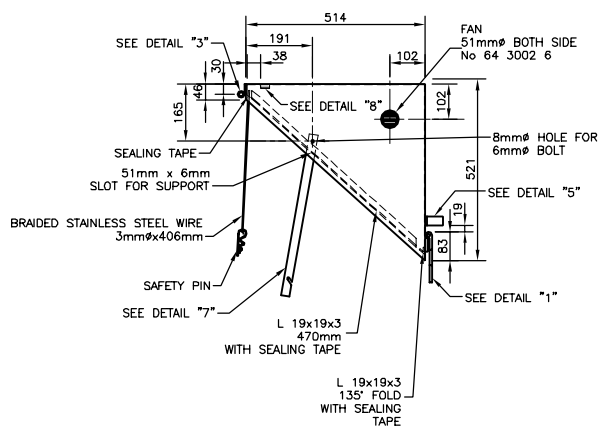
**BATTERY BOX**  
 SCALE 1:10  
 FRONT ELEVATION



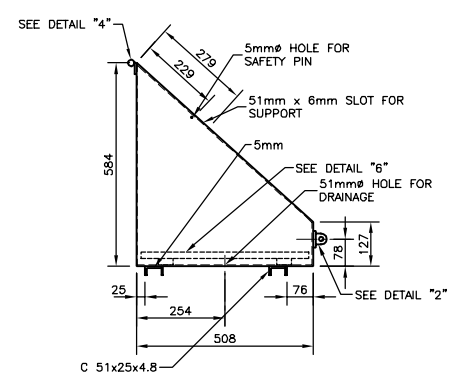
**BOX COVER**  
 SCALE 1:10  
 BACK ELEVATION



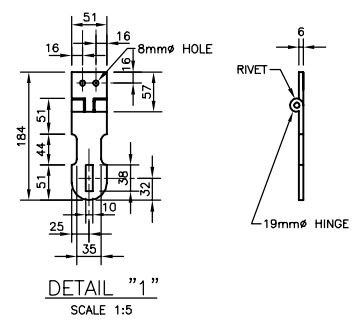
**BATTERY BOX**  
 SCALE 1:10  
 BACK ELEVATION



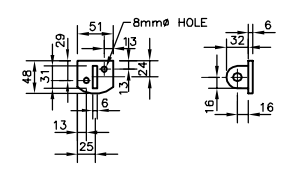
**BOX COVER**  
 SCALE 1:10  
 ELEVATION



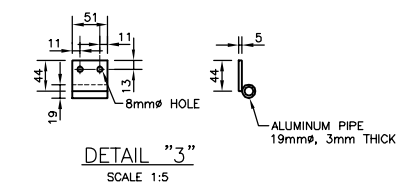
**BATTERY BOX**  
 SCALE 1:10  
 ELEVATION



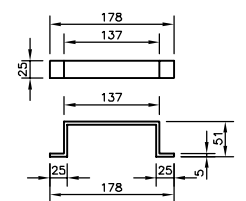
**DETAIL "1"**  
 SCALE 1:5



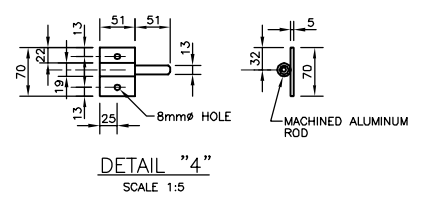
**DETAIL "2"**  
 SCALE 1:5



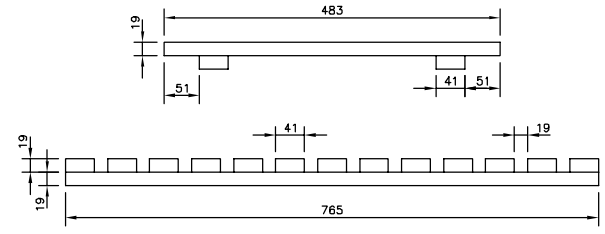
**DETAIL "3"**  
 SCALE 1:5



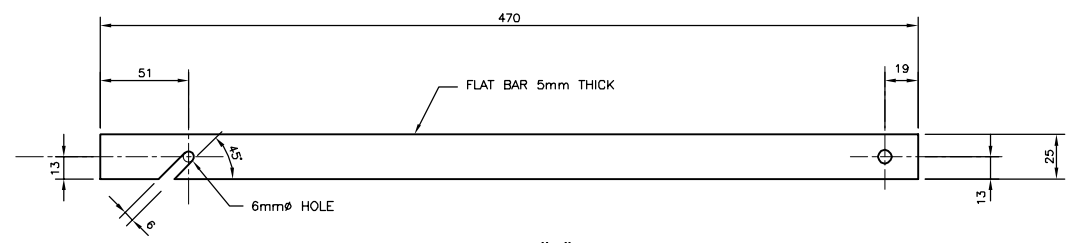
**DETAIL "5"**  
 SCALE 1:5



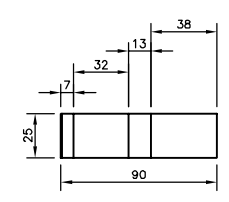
**DETAIL "4"**  
 SCALE 1:5



**DETAIL "6"**  
 SCALE 1:5



**DETAIL "7"**  
 SCALE 1:2



**DETAIL "8"**  
 SCALE 1:2

NOTES:  
 - ALL COMPONENTS ARE MADE OF ALUMINUM 3mm OR 5mm THICK, AS SHOWN, UNLESS OTHERWISE NOTED.  
 - ALL SCREWS AND BOLTS ARE STAINLESS STEEL 6mm.  
 - ALL COMPONENTS SHALL BE WELDED UNLESS OTHERWISE INDICATED.

3	FOR CONSTRUCTION	P-C.G.	04-05-31
2	DEFINITIVE	P-C.G.	04-01-08
1	DEFINITIVE	P-C.G.	03-12-83

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est référencé		
C	Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

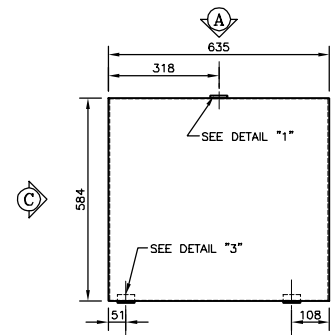
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 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessiné par:  
 Drawn by:  
**CANADIAN COAST GUARD**

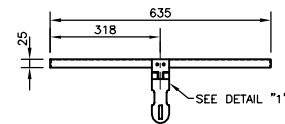
Vérifié par:  
 Verified by:  
**CANADIAN COAST GUARD**

No. dossier:  
 File no.:  
 No. dessin:  
 Drawing no.:  
 Echelle:  
 Scale:  
**INDICATED**  
 08733 29

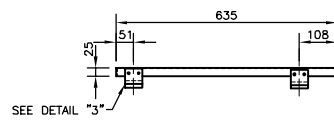
Services techniques / Systems électroniques et informatiques /  
 Informations techniques et graphiques  
 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7Y7



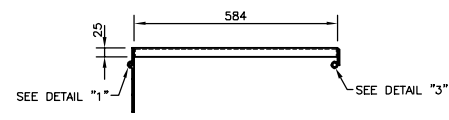
**BOX COVER**  
 SCALE 1:10  
 PLAN VIEW



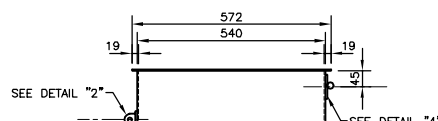
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 SCALE 1:10



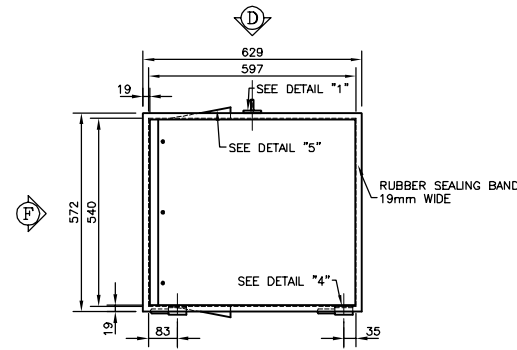
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 SCALE 1:10



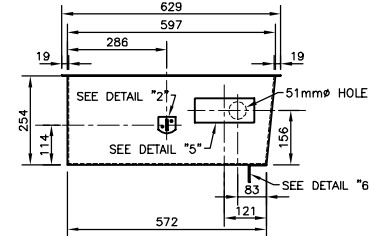
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 SCALE 1:10



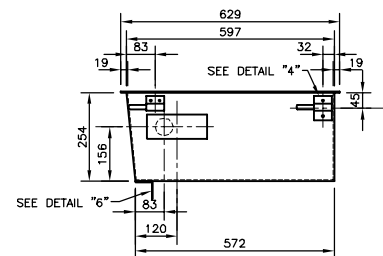
**ELEVATION**  
 SCALE 1:10



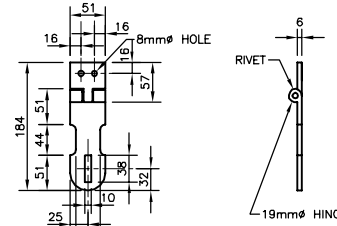
**BATTERY BOX**  
 SCALE 1:10  
 PLAN VIEW



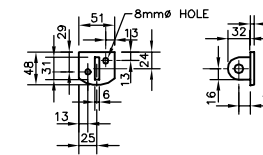
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 SCALE 1:10



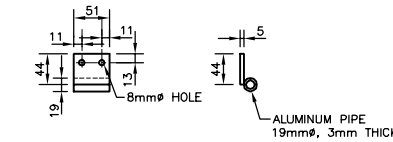
**ELEVATION**  
 SCALE 1:10



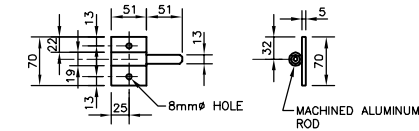
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 SCALE 1:5  
 (MELTED IN BRASS)



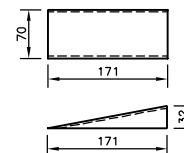
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 SCALE 1:5  
 (MELTED IN BRASS)



**DETAIL "3"**  
 SCALE 1:5



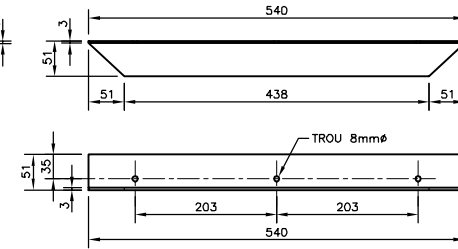
**DETAIL "4"**  
 SCALE 1:5



**DETAIL "5"**  
 SCALE 1:5  
 (ALUMINUM 3mm)



**DETAIL "6"**  
 SCALE 1:5



NOTES:  
 - ALL COMPONENTS ARE MADE OF ALUMINUM 3mm OR 5mm THICK, AS SHOWN, UNLESS OTHERWISE NOTED.  
 - ALL SCREWS AND BOLTS ARE STAINLESS STEEL 6mm.  
 - ALL COMPONENTS SHALL BE WELDED UNLESS OTHERWISE INDICATED.

3	FOR CONSTRUCTION	P-C.G. 04-01-08
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-83

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est référencé		
C	Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
 SERVICE BOX

Conçu par:  
 Designed by:  
**CANADIAN COAST GUARD** Date

Dessiné par:  
 Drawn by:  
**CANADIAN COAST GUARD** Date

Vérifié par:  
 Verified by:  
**CANADIAN COAST GUARD** Date

Approuvé par:  
 Approved by:

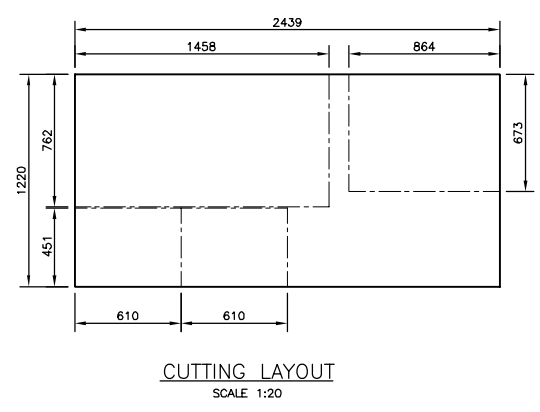
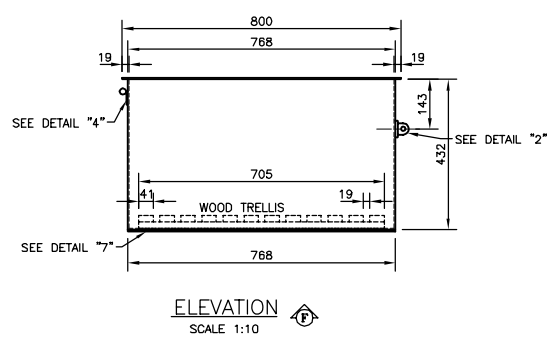
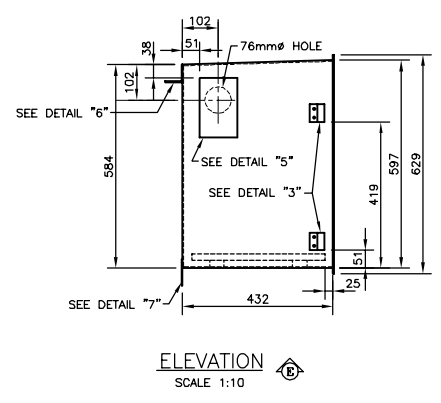
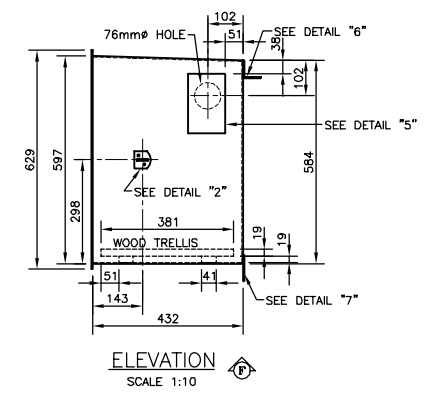
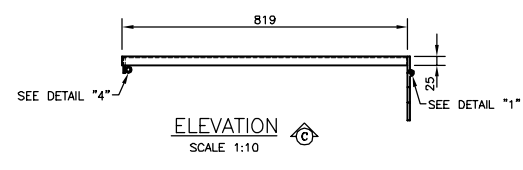
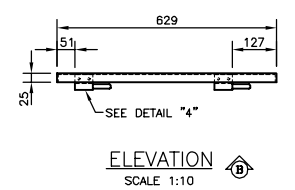
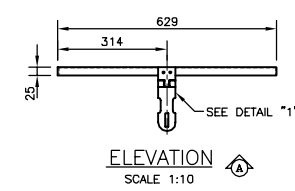
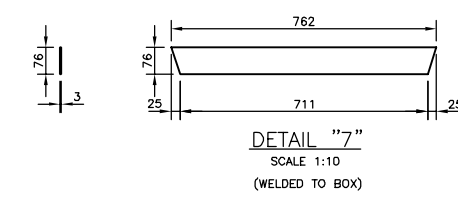
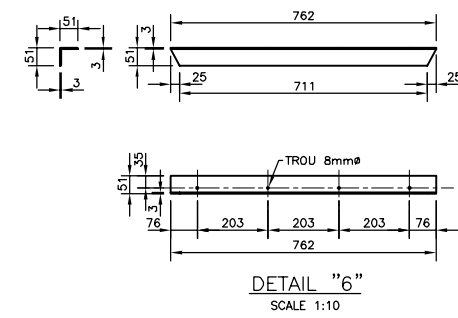
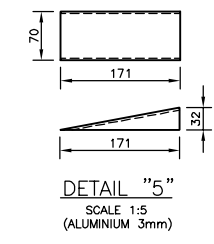
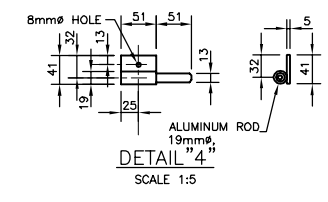
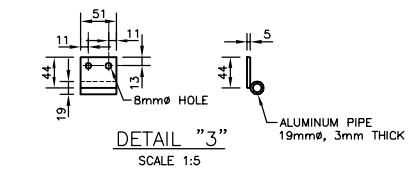
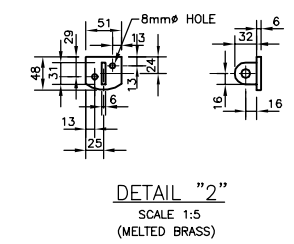
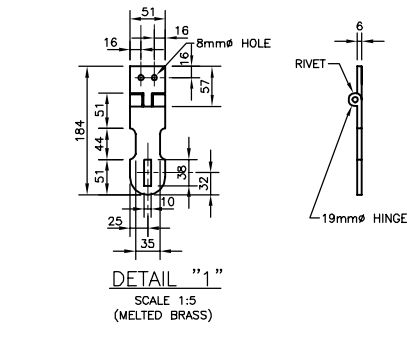
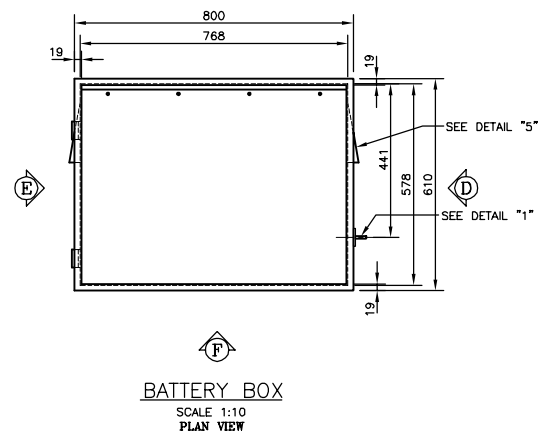
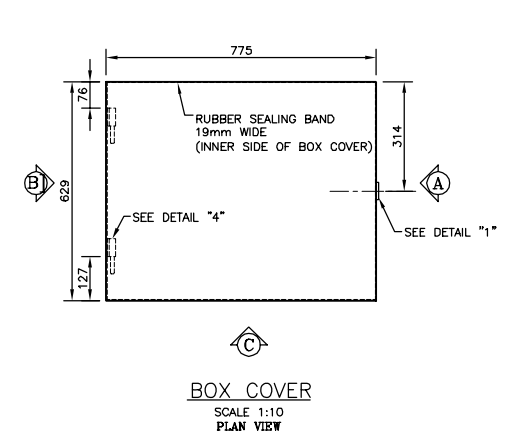
No. dossier:  
 File no.:

No. dessin:  
 Drawing no.:

Échelle:  
 Scale:  
**INDICATED**

80733 30

Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101, Boul. Champlain (dépot 18)  
 Québec (Québec) G1K 7Y7



**NOTES:**  
 - ALL COMPONENTS ARE MADE OF ALUMINIUM 3mm OR 5mm THICK, AS SHOWN, UNLESS OTHERWISE NOTED.  
 - ALL SCREWS AND BOLTS ARE STAINLESS STEEL 6mm.  
 - ALL COMPONENTS SHALL BE WELDED UNLESS OTHERWISE INDICATED.

**MATERIAL :**  
 - 1 ALUMINIUM SHEET 1220x2438x3mm  
 - 3 76mm FAN  
 - 1 SAFETY HASP  
 - 1ALUMINIUM ANGLE 51x762x3mm  
 - 1 ALUMINIUM 51x762x3mm FLAT BAR

**CONSTRUCTION :**  
 - 8 @ 10 HOURS, WELDING INCLUDED.

3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEFINITIVE	P-C.G. 04-01-08
1	DEFINITIVE	P-C.G. 03-12-83

Révision	Description	Par/By	Date
A	Numéro du détail		
B	Feuille sur laquelle le détail est référencé		
C	Feuille sur laquelle le détail est dessiné		

Toute modification doit être rapportée à:  
 All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

**Dossier:**  
 File:

**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

**Dessin:**  
 Drawing:

ALUMINIUM BATTERY BOX  
 FOR 2 BATTERIES  
 SHOP DRAWING

**Conçu par:**  
 Designed by: **CANADIAN COAST GUARD** Date

**Dessiné par:**  
 Drawn by: **CANADIAN COAST GUARD** Date

**Vérifié par:**  
 Verified by: **CANADIAN COAST GUARD** Date

**Approuvé par:**  
 Approved by: Date

No. dossier: / Échelle: /  
 File no.: / Scale: /

No. dessin: / No. feuille: /  
 Drawing no.: / Sheet no.: /

**INDICATED**

08733 31

Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Blvd. Champlain (dépot 18)  
 Québec (Québec) G1K 7Y7

**MATERIAL**

NOTE:  
 ALL MATERIAL MUST CONFORM WITH THE CAN/CSA-B72-M87 STANDARD (INSTALLATION CODE FOR LIGHTNING CONDUCTOR SYSTEMS).

CODE	DESCRIPTION
1	AERIAL TERMINALS MADE FROM SOLID COPPER RODS SUCH AS ERICO LP-C 247L OR THE EQUIVALENT.
2	TINNED SOLID COPPER AERIAL TERMINAL SUPPORTS SUCH AS ERICO LP-C-338-56L OR THE EQUIVALENT.
3	FLEXIBLE STRANDED AND BUNCHED TINNED COPPER GROUND CONDUCTOR SUCH AS ERICO LP-C 124L OR THE EQUIVALENT.
4	MECHANICAL FIXATIONS WITH MAXIMUM SPACING OF 1500 ALONG THE ENTIRE LENGTH OF THE GROUND CONDUCTOR. THE TOWER'S STRUCTURAL INTEGRITY MUST BE MAINTAINED (NO PERFORATION).
5A	THERMIT WELDING CONNECTIONS.
5B	MECHANICAL CONNECTIONS.
6	PRIMARY GROUND RODS MADE OF GALVANIZED STEEL WITH A DIAMETER OF AT LEAST 19mm BURIED IN THE GROUND.
7	ERICO OR EQUIVALENT "GEM" TYPE CONDUCTIVE FILLER MATERIAL.
8	BURNDY TYPE «HP-N» CABLE SUPPORT.
9	ANGLE IRON ATTACHMENT.

3	FOR CONSTRUCTION	P-C.G. 04-05-31
2	DEPARTIVE	P-C.G. 04-01-08
1	DÉPARTIF - POUR APPROBATION	P-C.G. 03-07-25

Révision	Description	Par/By	Date
A	Numéro du détail Detail no.		
B	Feuille sur laquelle le détail est référencé Location drawing no.		
C	Feuille sur laquelle le détail est dessiné Drawing no.		

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 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:  
**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessin:  
 Drawing:  
**LIGHTNING CONDUCTOR  
 ERECTION DIAGRAM**

Conçu par:  
 Designed by:  
**P.-C. GAGNON, Ing. 2003/05/03**

Dessiné par:  
 Drawn by:  
**ERIC GAGNON, tech. 2003/05/03**

Vérifié par:  
 Verified by:  
**P.-C. GAGNON, Ing. 2003/05/03**

Approuvé par:  
 Approved by:

No. dossier:  
 File no.:

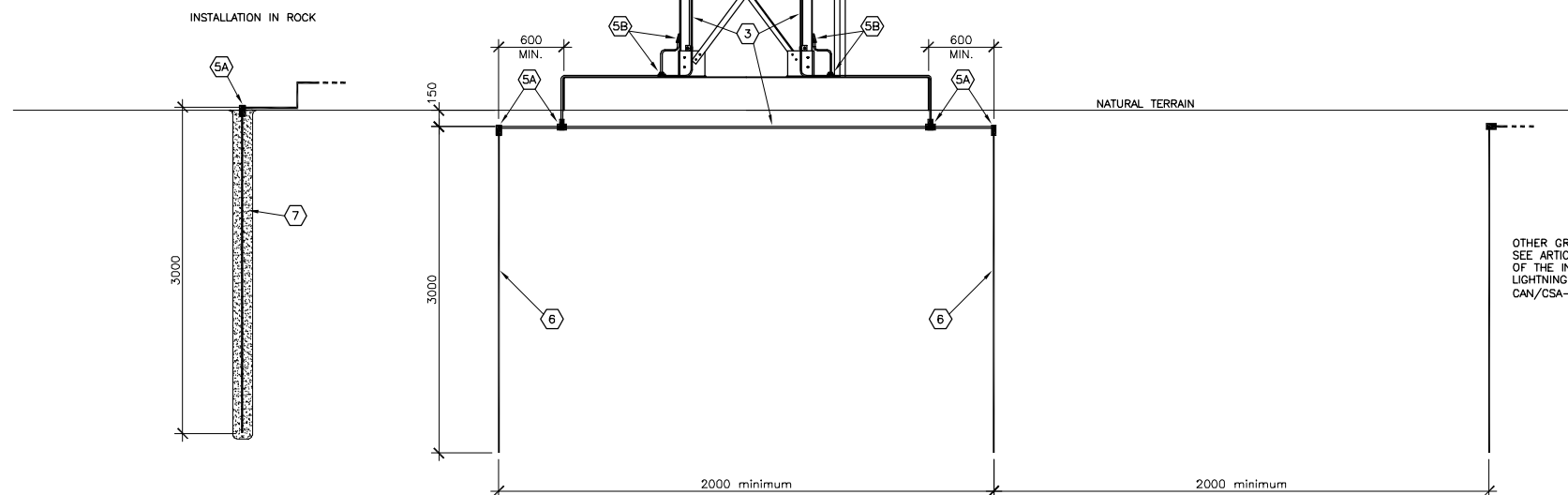
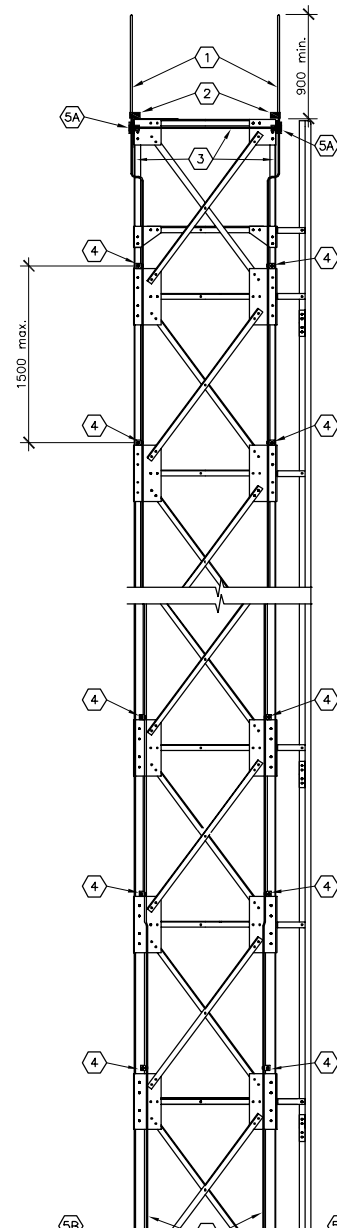
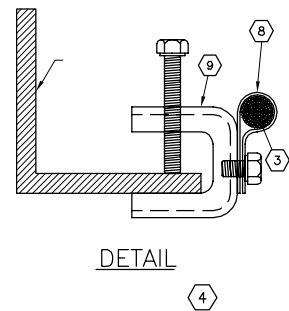
No. dessin:  
 Drawing no.:

Échelle:  
 Scale:  
**INDICATED**

No. dossier:  
 File no.: 08733  
 No. dessin:  
 Drawing no.: 32

**SPECIFICATIONS**

- BECOME FAMILIARIZED WITH THE PLANS AND INFORM THE ENGINEER OF ANY ERRORS OR OMISSIONS.
  - NO ADDITIONAL COSTS WILL BE ALLOTTED FOR MODIFICATIONS DUE TO WORKSITE CONDITIONS.
  - WORK RELATING TO THE PRESENT CONTRACT IS NOT LIMITED TO THE INDICATIONS PROVIDED IN THE PLANS. THE CONTRACTOR SHALL PERFORM THE VERIFICATIONS NECESSARY TO ENSURE THAT THE INSTALLATION CONFORMS WITH THE STANDARDS OF GOOD PRACTICE AND THAT IT IS BOTH COMPLETE AND OPERATIONAL. UNLESS OTHERWISE INDICATED, THE INSTALLATIONS SHALL CONFORM WITH THE RECOMMENDATIONS OF THE MANUFACTURERS.
  - ALL EQUIPMENT, INSULATORS AND OTHER MATERIALS MUST BE INSTALLED ACCORDING TO THE RECOMMENDATIONS OF THE MANUFACTURERS, AS WELL AS ACCORDING TO ANY PRECISE INSTALLATION INSTRUCTIONS INCLUDED IN THE PRESENT PLANS AND SPECIFICATIONS.
  - THE PRESENT CONTRACTOR MUST ENSURE THAT THE EQUIPMENT REQUIRED IN HIS FIELD OF WORK IS FORWARDED TO THE LOCATIONS INTENDED IN THE PLANS AND SPECIFICATIONS. UNLESS AN AGREEMENT IS REACHED WITH THE OWNER, THE COSTS RELATED TO THE FORWARDING OF THIS EQUIPMENT MUST BE INCLUDED IN THE TOTAL AMOUNT OF THE BID BY THE PRESENT CONTRACTOR OR THE GENERAL CONTRACTOR.
  - THE CONTRACTOR MUST BE RECOGNIZED AND SHALL POSSESS ALL THE KNOWLEDGE, PERMITS, LICENSES (#4503) AND AUTHORIZATIONS REQUIRED FOR EXECUTING THIS TYPE OF WORK.  
 RECOGNIZED COMPANY: L.P. GRENIER INC. OR EQUIVALENT.
- THE CONTRACTOR MUST CONFORM WITH THE REGULATIONS AND CODES IN FORCE IN THE PROVINCE OF QUEBEC RELATING TO THIS TYPE OF INSTALLATION.
  - THE LIGHTNING CONDUCTOR SYSTEM MUST CONFORM WITH THE MINIMUMS SET OUT IN STANDARD CAN/CSA-B72-M87 (INSTALLATION CODE FOR LIGHTNING CONDUCTOR SYSTEMS).
- BOND**
    - THE CONTRACTOR SHALL PROVIDE A CONTRACT PERFORMANCE BOND THAT SHALL INCLUDE THE GUARANTEE PERIOD. THE BOND SHALL BE DRAFTED IN ACCORDANCE WITH FORM TYPE CCDC 221 AND BE ISSUED BY:
      - AN INSURANCE COMPANY THAT HOLDS A LICENSE FOR UNDERWRITING GUARANTEE INSURANCE IN THE PROVINCE OF QUEBEC ISSUED BY THE INSPECTOR GENERAL OF FINANCIAL INSTITUTIONS.
      - A FINANCIAL INSTITUTION (REGULATED BY THE BANK ACT, R.S.Q. CH. B-1.01 ANNEXE 1 OR THE SAVINGS AND CREDIT UNIONS ACT, R.S.Q. CH. C-4) DOING BUSINESS IN QUEBEC.
- AS OF FINAL ACCEPTANCE OF WORK, TO GUARANTEE THIS ACCORDING TO THE MOST EXACTING OF THE FOLLOWING CONDITIONS:
    - FOR A MINIMUM OF ONE YEAR.
    - ACCORDING TO THE USUAL MANUFACTURER GUARANTEES.
    - ACCORDING TO THE CIVIL CODE.
    - THE CONTRACTOR REMAINS RESPONSIBLE FOR AND THE GUARANTOR OF THE GOOD OPERATION OF THE WORK THAT HE HAS COMPLETED FOR A PERIOD OF 12 MONTHS OR ACCORDING TO THE ADDITIONAL GUARANTEES REQUIRED AS OF FINAL ACCEPTANCE OF WORK.
  - RESISTANCE TESTS WILL BE REQUIRED FOR THE EARTH ELECTRODES OF EVERY SYSTEM INSTALLED. THE METHOD OF MEASUREMENT SHALL BE APPROVED BY THE ENGINEER. THE ENGINEER SHALL BE PROVIDED WITH A RESULTS TABLE AND THE FORMER RESERVES THE RIGHT TO CARRY OUT A RANDOM VERIFICATION USING AN METHOD OF MEASUREMENT IDENTICAL TO THE ONE THAT IS RECOGNIZED.
  - TO SUBMIT TO THE ENGINEER, FOR EXAMINATION, 5 COPIES OF THE DETAILED SHOP DRAWINGS FOR EACH ITEM OF EQUIPMENT TO BE PROVIDED, WITH EVERY CHARACTERISTIC MENTIONED IN THE PLANS AND SPECIFICATIONS AND THOSE REQUIRED IN ORDER FOR THE DEVICE TO BE ANALYZED. EACH DRAWING SHALL THEN BE REPRODUCED BY THE CONTRACTOR FOLLOWING APPROVAL. EACH COPY SHALL INDICATE THE NAME OF THE PROJECT AND THE REFERENCE INDICATED ON THE PLANS (FOR EXAMPLE: TYPE FA FLUORESCENT). ON COMPLETION OF THE WORK, THE ACCEPTED PRODUCT DRAWINGS SHALL BE RETURNED, ALONG WITH 2 SEPARATELY BOUND COPIES OF THE INSTRUCTION, OPERATION AND MAINTENANCE BOOKLETS RELATING TO THESE PRODUCTS.
  - IF NECESSARY, ALL CHANGES TO THE PLANS AND SPECIFICATIONS SHALL BE INDICATED IN RED ON ONE COPY.
  - THE CONTRACTOR SHALL INFORM THE OWNER AND THE ENGINEER OF ANY BREAKAGE OF EXISTING EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PUTTING SUCH EQUIPMENT BACK IN GOOD WORKING ORDER.
  - FOR ANY MODIFICATION MADE TO THE CONTRACT, THE CONTRACTOR SHALL PRODUCE A DETAILED ESTIMATE FOR EACH ARTICLE OF THE MODIFICATION PROJECT ISSUED BY THE ENGINEER. HE SHALL CLEARLY INDICATE THE NUMBER OF HOURS, QUANTITIES AND UNIT PRICES OF MATERIALS; MARKUPS PERMITTED ABOVE SHALL BE ADDED AT THE END, TO THE TOTALS.

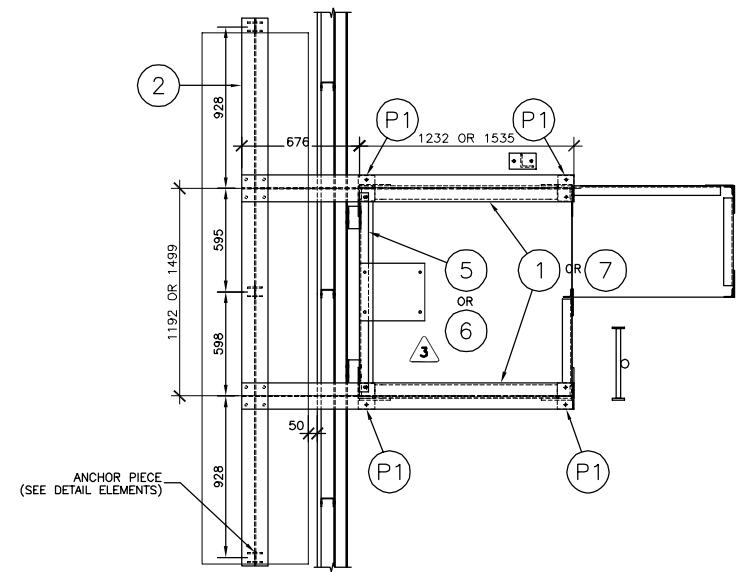
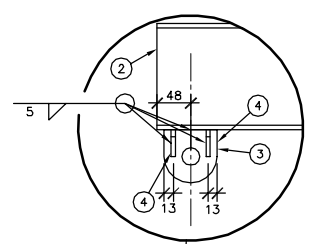


OTHER GROUNDING NETWORK.  
 SEE ARTICLES 6.2.2. AND 6.7  
 OF THE INSTALLATION CODE FOR  
 LIGHTNING CONDUCTOR SYSTEMS  
 CAN/CSA-B72-M87.

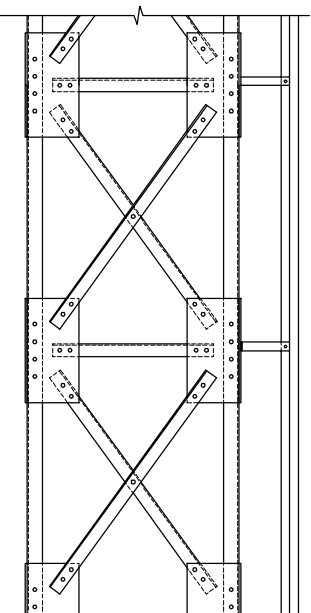
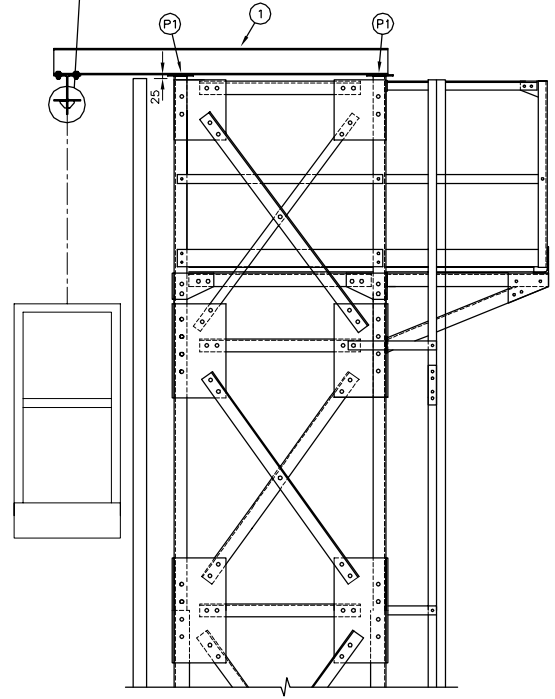
**ELEVATION**  
 1:30

Services techniques  
 Systèmes électroniques et informatiques  
 Informations techniques et graphiques  
 101 Blvd. Champlain (dépot 18)  
 Québec (Québec) G1K 7Y7

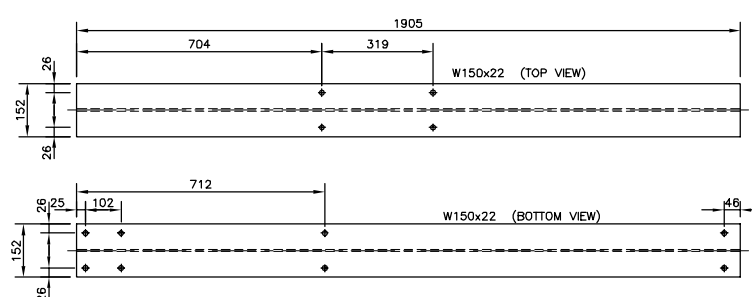
MATERIAL LIST					
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1	W 150 X 22 X 1908	350 MPa	08733-35	2	84,0
2	W 150 X 22 X 3144	350 MPa	08733-35	1	69,2
3	PL 76 X 76 X 6,4	350 MPa	08733-35	3	0,9
4	PL 38 X 38 X 6,4	350 MPa	08733-22	12	0,6
5	L 51 X 51 X 6,4 X 1142	350 MPa	08733-22	1	5,4
6	L 51 X 51 X 6,4 X 1449	350 MPa	08733-22	1	6,9
7	W 15 X 22 X 2210	350 MPa	08733-22	2	98,6
TOTAL					153,2 OU 170,8
BOLTS, NUTS AND WASHERS					
BL2	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	20	S/O
NOTES:					
- ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CANCSA-6154 (MINIMUM APPLICATION RATE = 600g/m <sup>2</sup> )					
- BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.					



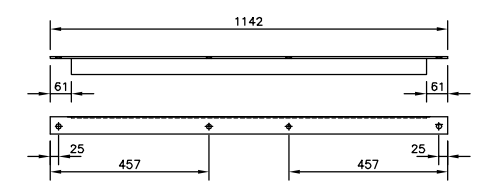
PLAN VIEW  
N.T.S.



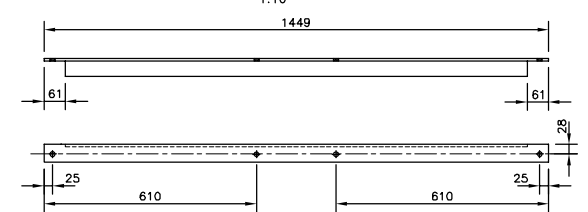
LEFT ELEVATION  
1:20



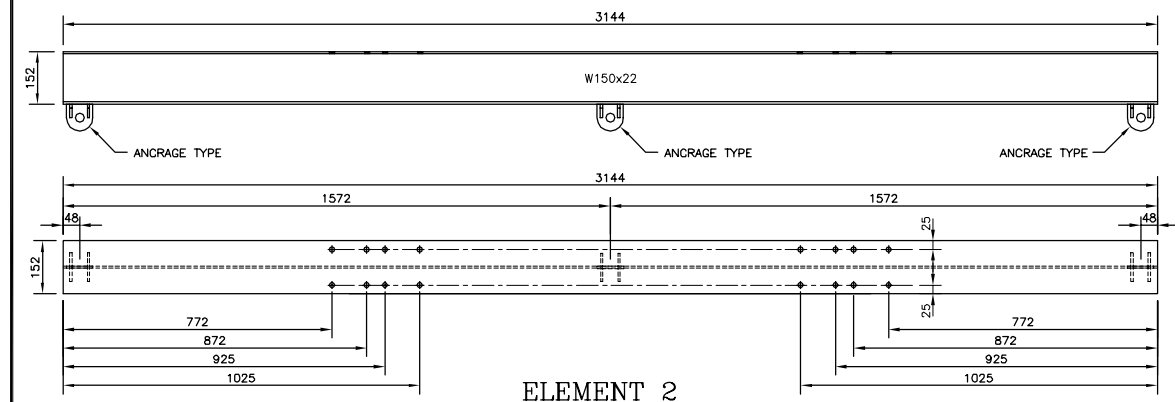
ELEMENT 1  
1:10



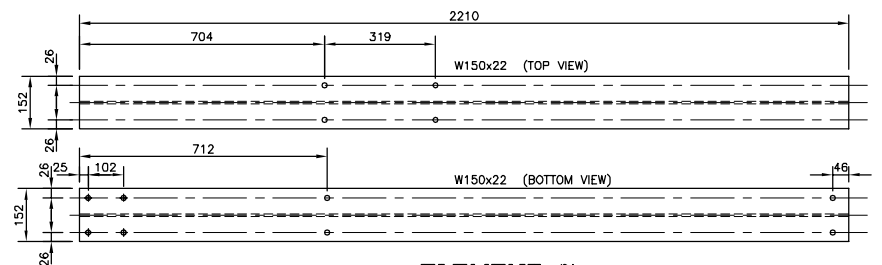
ELEMENT 5  
1:10



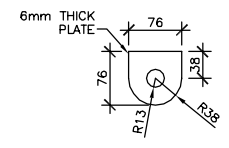
ELEMENT 6  
1:10



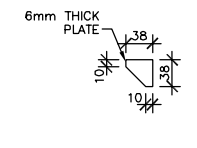
ELEMENT 2  
1:10



ELEMENT 7  
1:10



ELEMENT 3  
1:5



ELEMENT 4  
1:5

NOTE: DIAMETER OF HOLES SHALL BE 15mm UNLESS OTHERWISE NOTED.

Revisión	Description	Par/By	Date
3	IMMAGINATION AND SUPPORT MODIFIED	L.T.S.	05-04-04
2	FOR CONSTRUCTION	P.-C.G.	04-05-31
1	DEFINITIVE	P.-C.G.	03-12-23

A: Numéro du détail  
 B: Feuille sur laquelle le détail est réferé  
 C: Feuille sur laquelle le détail est dessiné

Toute modification doit être rapportée à:  
 GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

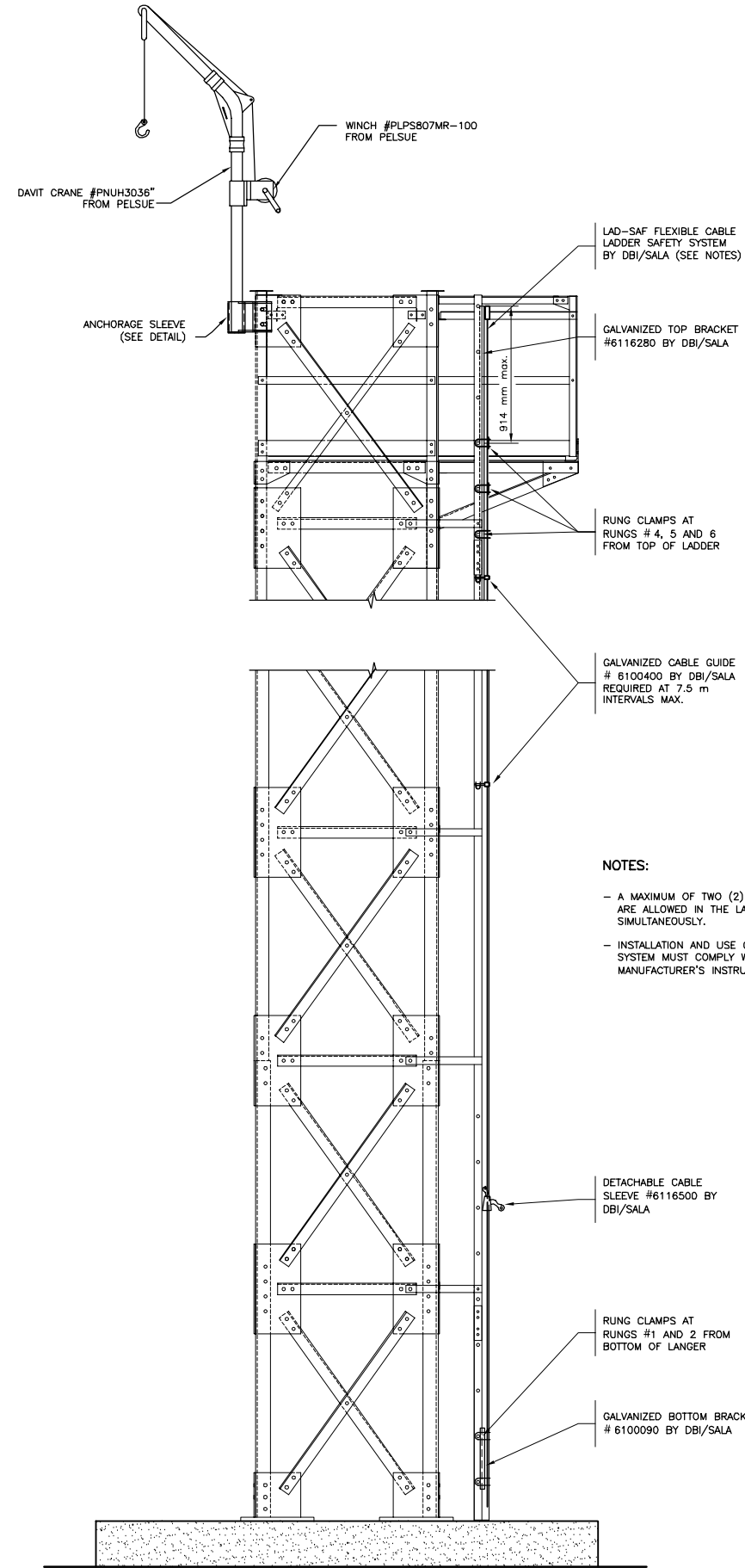
LATTICED STEEL TOWERS  
 HEIGHT 3m (10ft) @ 24,4m (80ft)

MAINTENANCE PLATFORM SUPPORT

Conçu par: P.-C. GAGNON, Ing. 2003/05/30  
 Dessiné par: ERIC GAGNON, tech. 2003/05/30  
 Vérifié par: P.-C. GAGNON, Ing. 2003/05/30

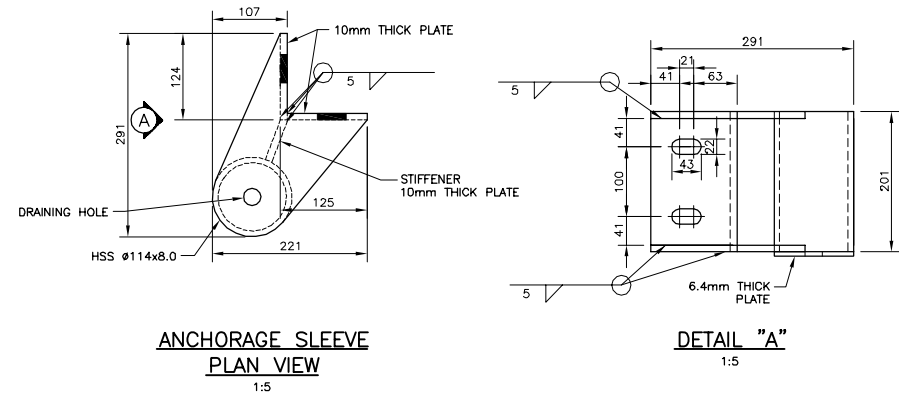
Approuvé par: INDICATED  
 No. dossier: 08733  
 No. feuille: 33

Services techniques  
 Systèmes électroniques et informatiques  
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 101 Boul. Champlain (dépt 18)  
 Québec (Québec) G1K 7T7



**NOTES:**

- A MAXIMUM OF TWO (2) USERS ARE ALLOWED IN THE LADDER SIMULTANEOUSLY.
- INSTALLATION AND USE OF SYSTEM MUST COMPLY WITH MANUFACTURER'S INSTRUCTIONS.



LEFT ELEVATION  
 SCALE 1:20

4	FALL ARRESTING DEVICE	P.-C.G.	04-11-03
3	FOR CONSTRUCTION	P.-C.G.	04-05-31
2	DEFINITIVE	P.-C.G.	04-01-08
1	DEFINITIVE	P.-C.G.	03-12-03

Révision	Description	Par/By	Date
A	Numéro du détail Detail no.	A	C
B	Feuille sur laquelle le détail est référencé Location drawing no.	B	C
C	Feuille sur laquelle le détail est dessiné Drawing no.	C	B

Toute modification doit être rapportée à:  
 All modification must be reported to:

GARDE CÔTIÈRE, RÉGION LAURENTIENNE  
 SERVICES TECHNIQUES  
 Systèmes électroniques et informatiques  
 Informations Techniques et Graphiques

Dossier:  
 File:

**LATTICED STEEL TOWERS**  
 HEIGHT 3m (10ft) @ 24.4m (80ft)

Dessiné par:  
 Drawn by:

DAVIT CRANE FOR EQUIPMENT AND TOWER ERECTION

Conçu par:  
 Designed by: P.-C. GAGNON, Ing. 2003/05/30

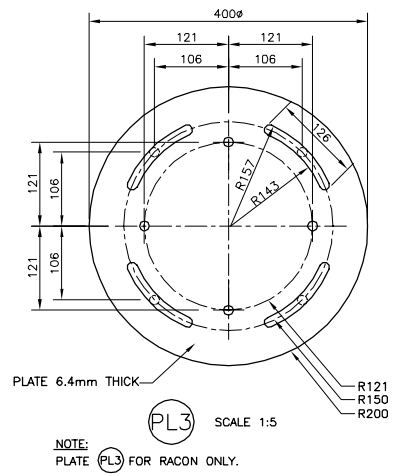
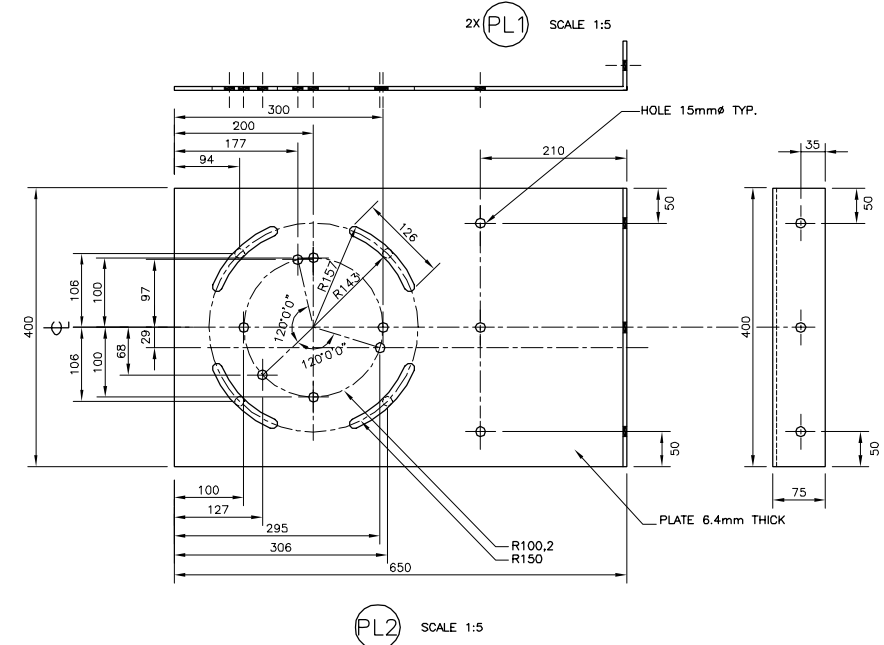
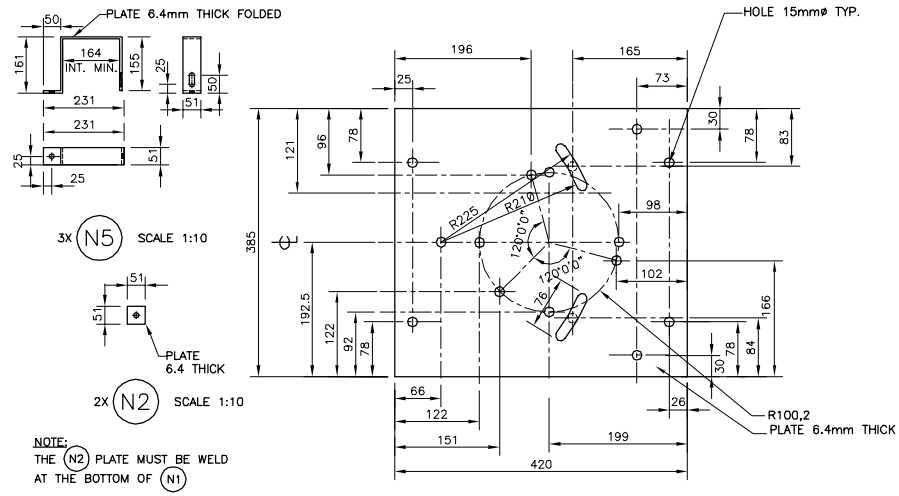
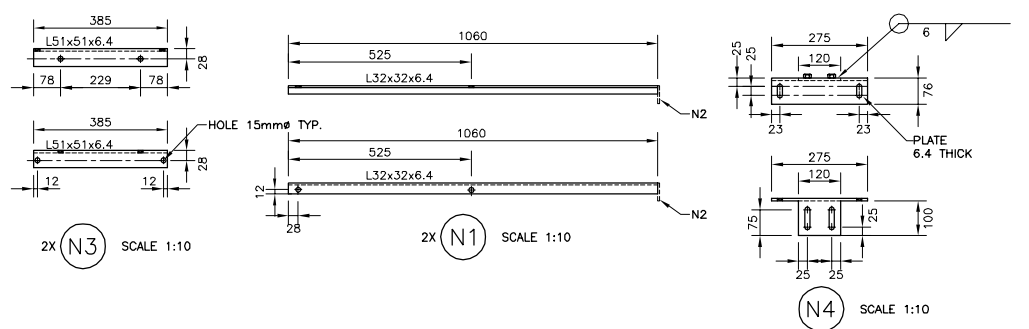
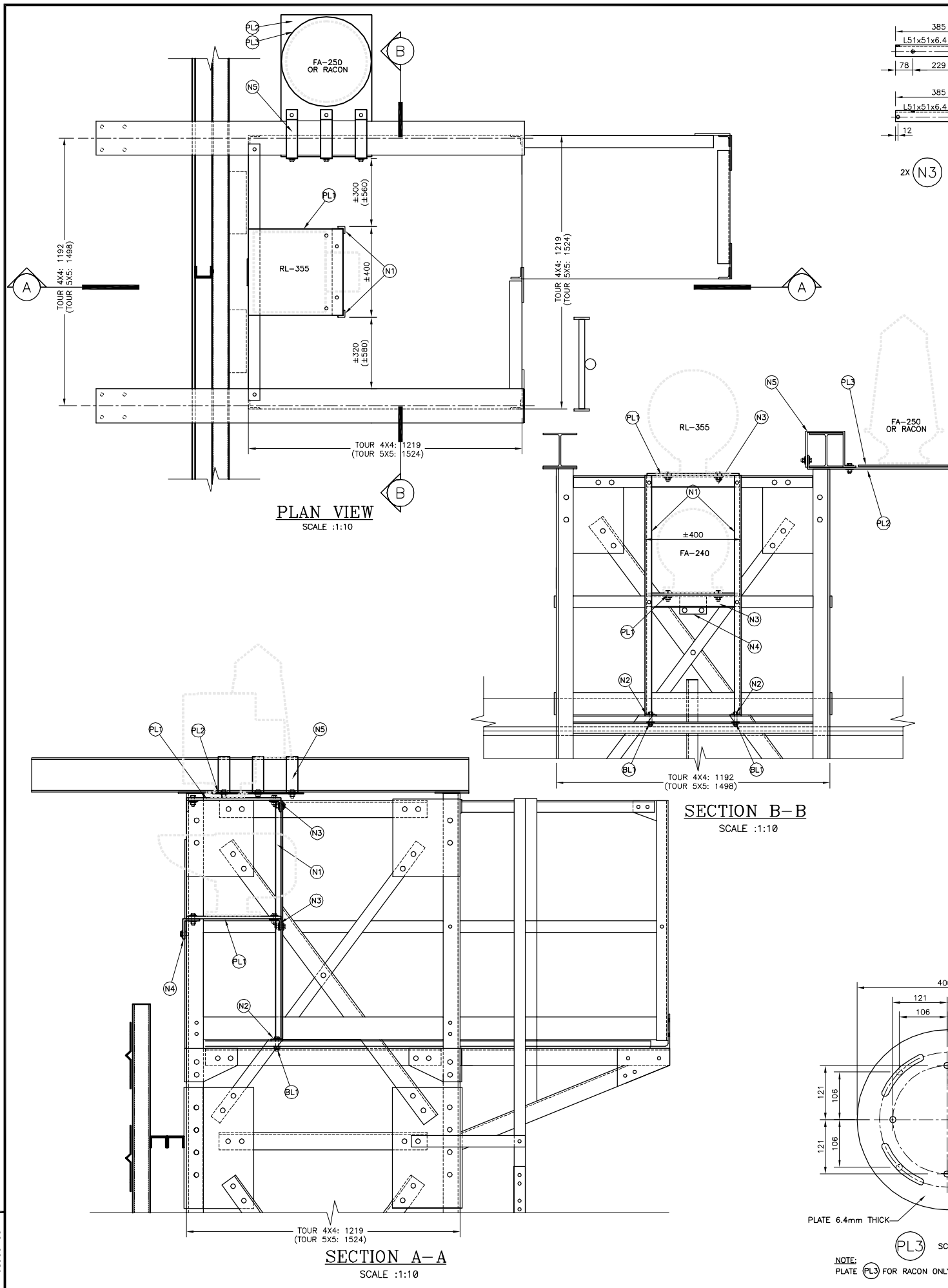
Dessiné par:  
 Drawn by: ERIC GAGNON, tech. 2003/05/30

Vérifié par:  
 Verified by: P.-C. GAGNON, Ing. 2003/05/30

Approuvé par:  
 Approved by:

No. dossier: File no.:	Échelle: Scale:
No. dessin: Drawing no.:	INDICATED
08733	34

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101 Blvd. Champlain (dépot 18)  
Québec (Québec) G1K 7Y7



MATERIAL LIST				
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY
N1	L 32 X 32 X 6.4 X 1060	350 MPa	08733-35	2
N2	PL 51 X 51 X 6.4	350 MPa	08733-35	2
N3	L 51 X 51 X 6.4 X 385	350 MPa	08733-35	2
N4	PL 120 X 199 X 6.4 / PL 275 X 78 X 6.4	350 MPa	08733-35	1
N5	PL 51 X 540 X 6.4	350 MPa	08733-35	3
PL1	PL 420 X 385 X 6.4	350 MPa	08733-35	2
PL2	PL 650 X 400 X 6.4	350 MPa	08733-35	1
PL3	PL 400 X 400 X 6.4	350 MPa	08733-35	1

BOLTS, NUTS AND WASHERS				
CODE	DESCRIPTION	GRADE	REFERENCE DRAWING	QUANTITY
BL1	Ø13mm X 52mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	2
BL2	Ø13mm X 38mm BOLT WITH NUT AND LOCK WASHER	ASTM-A325	S/O	24

NOTES:  
 - ALL STEEL AND BOLTS SHALL BE HOT GALVANIZED ACCORDING TO CAN/CSA-6164 (MINIMUM APPLICATION RATE = 600g/m<sup>2</sup>)  
 - BOLT HOLE DIAMETER SHALL BE 2mm GREATER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED.  
 - BOLTS TO FIX LIGHTS ON PLATES ARE NOT COUNTED

2	FABRICATION	D.L.	05-04-27
1	PRELIMINAIRE	L.T.G.	05-03-29
Revisión	Description	Par/By	Date
A	A: Numéro du détail Detail no.		
B	B: Feuille sur laquelle le détail est référencé Location drawing no.		
C	C: Feuille sur laquelle le détail est dessiné Drawing no.		
Toute modification doit être rapportée à: All modification must be reported to:			
GARDE CÔTIÈRE, RÉGION LAURENTIENNE SERVICES TECHNIQUES Systèmes électroniques et informatiques Informations Techniques et Graphiques			
Dossier: File:			
LATTICED STEEL TOWERS HEIGHT 3m (10ft) @ 24.4m (80ft)			
Dessiné par: Drawn by:			
COAST GUARD, QBC 2005/03/14			
Vérifié par: Verified by:			
L.T.G. 2005/03/14			
Approuvé par: Approved by:			
R.M. D.L. B.G. 2005/03/29			
No. dossier: File no.:			
DANIEL LEFEBVRE, Ing. 2005/04/27			
No. dessin: Drawing no.:			
88733			
Echelle: Scale:			
INDICATED			
35			