ZHAO ENGINEERING LTD

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VANCOUVER ALUMINUM PLUS LTD.

SUITE 106-107, 590 EBURY PLACE, DELTA, BC V3M 6K7

Allowable Spans for Aluminum Panel 3 ¼" × 24"

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Thickness (in)	Ground Snow Load (lb/ft^2)	Max. Span "a" (ft-in)	Max. Overhang "b"
0.025	40	9'-9"	2'-10"
	50	8'-4"	2'-3"
	60	7'-3"	1'-6"
0.0275	40	10'4"	3'-2"
	50	9'-10"	2'-10"
	60	9'-0"	2'-2"
0.032	40	12'-2"	3'-8"
	50	11'-4"	3'-2"
	60	10'-6"	2'-6"
0.040	40	13'-0"	3'-11"
	50	12'-3"	3'-4"
	60	11'-5"	2'-10"

T-Bar (Plexiglass Rib Support)
Allowable Spans for 2'-0" wide Plexiglas's Panel

Roof Pitch	Ground Snow Load (lb/ft^2)	Max. Span
Flat – 3:12	40	12'-0"
	50	11'-6"
	60	10'-10"
3:12 - 5:12	40	13'-6"
	50	13'-0"
	60	12'-2"
5:12 – 8:12	40	13'-11"
	50	13'-6"
	60	13'-0"
8:12 – 12:12	40	14'-6"
	50	13'-10"
	60	13'-2"


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Girder Beam Spans

Panel Span "a"	Ground Snow Load (lb/ft^2)	Max. Span (ft-in)
6'-0"	40	12'-8"
	50	12'-0"
	60	11'-6"
7'-0"	40	12'-5"
	50	12'-0"
	60	11'-5"
8'-0"	40	12'-2"
	50	11'-10"
	60	11'-3"
9'-0"	40	11'-10"
	50	11'-0"
	60	11'-0"
10'-0"	40	11'-7"
	50	11'-5"
	60	10'-7"
11'-0"	40	11'-2"
	50	11'-0"
	60	10'-2"
12'-0"	40	10'-10"
	50	10'-3"
	60	9'-7"
13'-0"	40	10'-2"
	50	9'-6"
	60	8'-9"

Material Specifications:
4 in I - beam: Beam height 4.0 in; Beam width 3.0 in; Sectional Area 0.974 in^2, Weight 1.146 lb/ft;
Material State 6063-T5 Aluminum.

Beam height 6.0 in; Beam width 3.0 in; Sectional Area 0.974 in^2; Weight 1.146 lb/ft;
Material State 6063 – T5 Aluminum.

3 in × 3 in Column:
Section dimension 2.952 in × 2.952 in; Sectional Area 0.781 in^2; Weight 0.919 lb/ft;
Material State 6063-T5 Aluminum.

Ground Snow Load S_S indicated includes Rain Load S_R of 8 lb/ft^2. Roof snow load is $0.55 \times S_S + S_R$. Design according to 2006 BC Building Code, NBCC 2010. Aluminum design according to CSA CAN3-S157-10.

The owner is responsible to obtain a building permit according to municipal requirements.
The patio cover must be supported by a structure having adequate strength to carry the loads due to the patio cover. A structural engineer should be consulted to design or verify the support structure.

Beam Span "L" Chart for 4 in I-beam

Panel Span "a"	Ground Snow Load (lb/ft^2)	Beam Span "L" (ft-in)					
		Single span + no overhang	Single span + 1'-10" overhang	Single span + 2'-0" Overhang	Single span + 3'-0" Overhang	Single span + 4'-0" Overhang	Two spans
6'-0"	40	14'-6"	12'-7"	11'-0"	10'-1"		10'-5"
	50	13'-4"	11'-1"	10'-0"	9'-2"		9'-5"
	60	12'-8"	10'-6"	9'-4"	8'-4"		8'-8"
7'-0"	40	13'-8"	12'-1"	10'-7"	9'-10"		9'-8"
	50	12'-1"	11'-6"	9'-8"	8'-10"		8'-9"
	60	11'-6"	10'-10"	9'-2"	8'-3"		8'-1"
8-0"	40	12'-7"	11'-6"	10'-6"	9'-6"		9'-1"
	50	11'-4"	10'-7"	9'-6"	8'-3"		8'-2"
	60	10'-6"	10'-0"	8'-11"	8'-1"		7'-6"
9'-0"	40	12'-1"	10'-7"	10'-0"	8'-10"		8'-6"
	50	11'-6"	10'-0"	9'-2"	8'-3"		7'-9"
	60	10'-0"	9'-2"	8'-8"	8'-0"		7'-1"
10'-0"	40	11'-6"	10'-4"	9'-8"	8'-7"	8'-0"	8'-1"
	50	10'-4"	9'-7"	9'-0"	8'-1"	7'-3"	7'-4"
	60	9'-6"	9'-0"	8'-4"	7'-6"	7-3"	6'-9"
11"-0"	40	10'-7"	10'-0"	9'-2"	8'-5"	7'-10"	7'-8"
	50	10'-0"	9'-8"	8'-5"	7'-11"	7'-6"	7'-0"
	60	9'-3"	8'-10"	7'-10"	7'-4"	7'-1"	6'-5"
12'-0"	40	10'-4"	9'-7"	9'-2"	8'-2"	7'-8"	7'-4"
	50	9'-5"	9'-0"	8'-10"	7'-8"	7'-4"	6'-8"
	60	8'-10"	8'-5"	8'-0"	7'-2"	7'-0"	6'-2"
13'-0"	40	10'-0"	9'-5"	8'-8"	8'-2"	7'-8"	7'-1"
	50	9'-3"	8'-5"	8'-0"	7'-9"	7'-4"	6'-6"
	60	8'-8"	7'-10"	7'-6"	7'-3"	6'-11"	5'-11"

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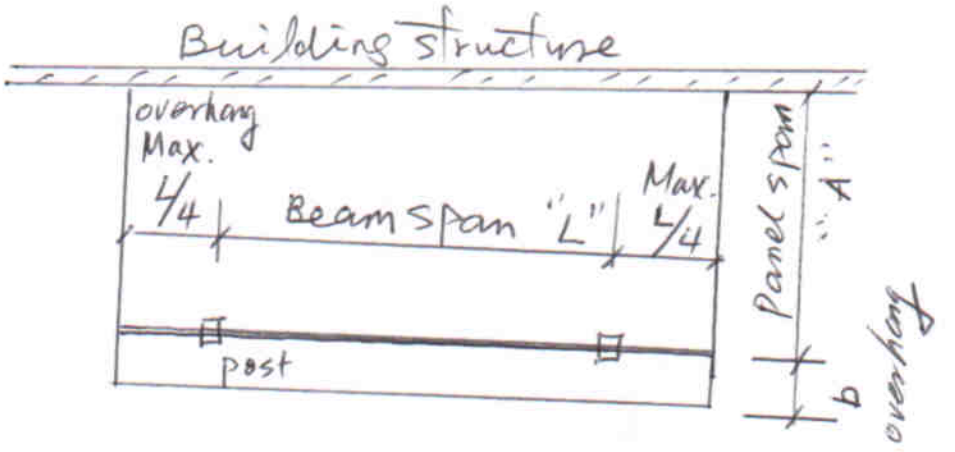
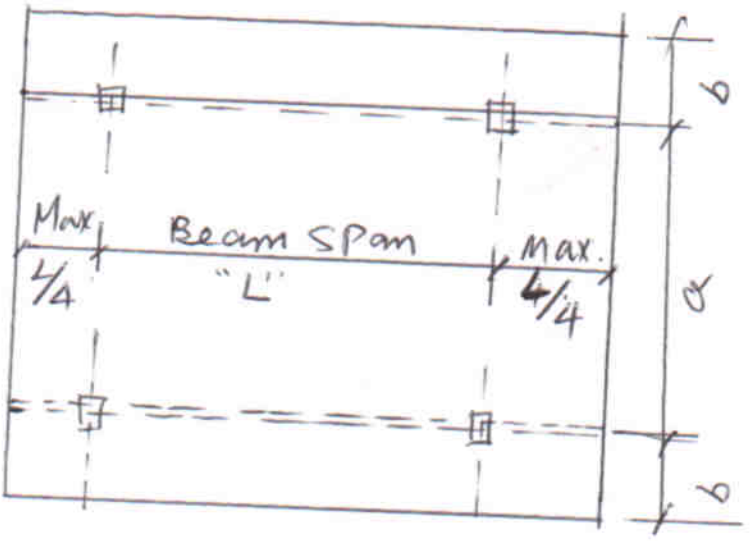
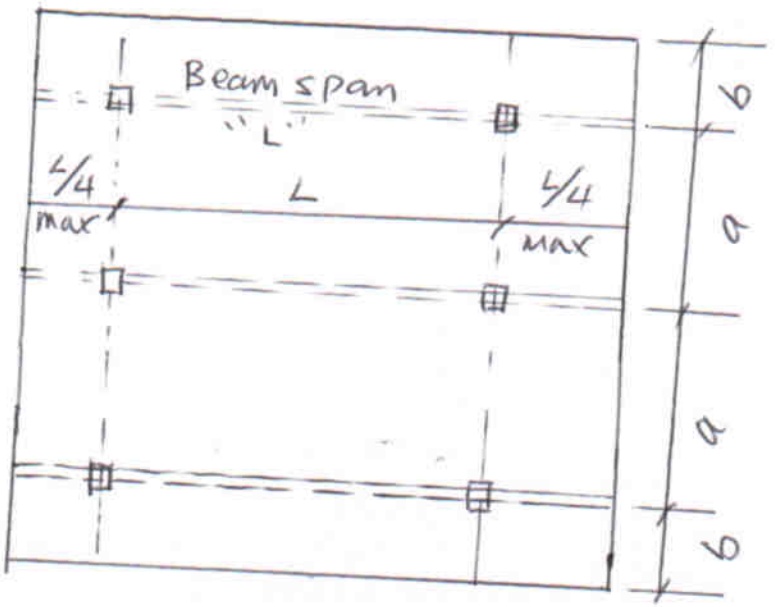
PATIO Cover Plan







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