

CSA STANDARD F280-12 COMPLIANCE		CSA F280-12 Form Set Ver 24.10	
NBC 2015: 9.33.5.1.; 9.36.3.2. & 9.36.5.15; NBC 2020; 9.33.5.1.; 9.36.3.2.; 9.36.5.15 (5); 9.36.8.9. (1);			
These documents issued for the use of BC MINISTRY OF HOUSING		PROJECT #	
and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.		1 DPLX1-U2-WEST 2	
BUILDING LOCATION			
Model: DPLX-01-UNIT 2	3 Site: WEST	6	
Address:	4 Lot:	7	
City & Province: PRINCE RUPERT, BC	5 Postal Code:	8	
COMPLIANCE (See page 2 for input summary and page 3 for room by room values)			
Submittal is for: ☐ Whole house ☒ Room by Room		Units: ☒ Imperial ☐ Metric	
HEATING			
Minimum Heating Capacity:		10,015 BTUH (total building heat loss as per 5.2.7)	
5.3.1	The total heat output capacity of all heating systems installed in a building shall not be less than 100% of the total building heat loss as determined in Clause 5.2.7.		
5.3.2	The combined heating delivery of the heating systems that serve a room or space shall not be less than 100% of the space heat loss , as determined in Clause 5.2.6.. (If room by room submittal, see page 2 for individual space heating requirements)		
COOLING			
Nominal Cooling Capacity:		6,614 BTUH (Nominal Cooling Capacity as per 6.3.1)	
Minimum Cooling Capacity:		5,292 BTUH	
		Maximum Cooling Capacity:	
		8,268 BTUH	
6.3.2	Except as provided in Clause 6.3.3., the cooling system capacity shall not be less than 80% of the nominal cooling capacity for the building, as determined in Clause 6.3.1.. In no case shall it be less than the nominal cooling capacity of the building minus 1800 W (0.51 tons)		
6.3.3	Where the cooling system is added to an existing heating system, it's capacity in Watts shall not exceed 18 times the capacity of the air-handling capacity of the existing system in L/s. (Cooling capacity in Tons not more than 1.0 per 400 CFM of air handling capacity)		
6.3.4	Except for ground-source and water source heat pumps used for cooling, and as permitted in Clause 6.3.5, the installed cooling capacity shall not exceed 125% of the nominal cooling capacity for the building, as determined in Clause 6.3.1.		
6.3.5	If the nominal cooling system capacity for the building, as determined in Clause 6.3.1. is less than 6,000 W (1.7 tons), the installed cooling system capacity may exceed the nominal cooling system capacity for the building by up to 1750 W (0.49 tons).		
ATTACHED DOCUMENTS			
☒ Design Summary		☒ Room by Room Results	
Other:		Other:	
Notes:			
CALCULATIONS PERFORMED BY			
Name:	TODD BACKUS	Designers Signature, Stamp Imprint or other certification mark	
Company:	TECA		
Address:	PO BOX 73105, EVERGREEN RO		
City & Prov.:	SURREY, BC		
Postal Code:	V3R 0J2		
Phone:	604-594-5956		
Fax:	-		
E-mail:	TBACKUS@TECA.CA		
		I, _____	
		have reviewed and take responsibility for the design work described in this document & I am qualified in the appropriate categories. 63	
		Accreditation Reference 1 64	
		Accreditation Reference 2 65	
		Issued for: (date) 66	
		Issued for: (date) 67	
		Page: 1 of 3	
 TECA HEAT LOSS & HEAT GAIN CALCULATOR		 HVAC DESIGNERS OF CANADA VERIFIED F280 SOFTWARE	

CSA F280-12 INPUT SUMMARY										CSA F280-12 Form Set Ver 24.10	
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and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.										PROJECT #: DPLX1-U2-WEST	
BUILDING LOCATION											
Model: DPLX-01-UNIT 2			3 Site: WEST			6 Lot:			7		
Address:			4 City/ Prov: PRINCE RUPERT, BC			5 Post. Code:			8		
CALCULATION BASED ON (See Following Page For Results)											
Dimensional Info Based On:			drawings done by: Leckie Studio Architecture + Design Inc.								
Attachment: Semi-Detached (Duplex)			10 Front Facing: N			16 Assumed? Yes			17		
# of Stories: 2 (3 total floors)			11 Air Tightness: 1.5			18 Assumed? Yes			19		
Weather Location: Prince Rupert			12 Internal Shading: No			21 Assumed? Yes			21a		
Wind Exposure, Site: Low crops, x/H > 20			20 Occupants: 3			22 Assumed? Yes			22a		
Wind Sheltering, Building: Light local shielding			20a Ventilated? Non-dedicated HRV			13 HRV/ERV? Yes			14		
Units: ☒ Imperial bi ☐ Metric bm			HRV ASE %: 65%			15 HRV ATRE %: 0%			15a		
HEATING DESIGN CONDITIONS						COOLING DESIGN CONDITIONS					
Outdoor Temp: -13°C, 8.6°F		24 Indoor Temp: 22°C, 71.6°F		25 Mean Soil Temp: 10°C, 50°F		26 Outdoor Temp: 19°C, 66.2°F		27 Range: 6°C, 42.8°F		29	
Soil Cond. Normal conductivity: dry sand, loam, clay		26a Water Table Depth: Normal (7-10m, 23-33ft)		26b Slab Fluid Temp: None		28 Indoor Temp: 24°C, 75.2°F		28 Latitude: 54.32		30	
ABOVE GRADE WALLS						BELOW GRADE WALLS					
ID 1: 1/ (TYP. EXT. WALL: R-22), inside wall, // 1/2" GWB, // framing w/ cavity insulation: softwood (default), 2x6 framing @ 16"OC, R20 (5.5"), // Sheathing materials, Softwood plywood, // Insulation, Mineral wool and glass fibre, // Cladding materials, Vinyl siding, outside air; 22.42R-VALUE						ID 1:					
31a						34a					
FLOOR HEADERS						CEILINGS					
ID 1: 1/ (TYP. HEADER: R-22); 22R-VALUE						ID 1: 1/ (TYP. ROOF: R-32), inside ceilings, // 1/2" GWB, // framing w/ cavity insulation: softwood (default), 2x6 framing @ 24"OC, custom insulation, // Sheathing materials, Softwood plywood, // Roofing materials, Built-up roofing, outside air; 32.01R-VALUE					
32a						40a					
WINDOWS						EXPOSED FLOORS					
ID 1: 1/ (Windows (Energy modelling assumptions)) custom, USI: 1.3, SHGC: 0.25						ID 1:					
49a						43a					
SKYLIGHTS						DOORS					
ID 1: 1/ (SKYLIGHT) double glazed, Fixed — Wood/Vinyl, insulating, low-E, 13mm Air, USI: 1.96, SHGC: 0.47						ID 1: 1/ (EXT. DOOR) Insulated metal — Polyurethane core, without storm door, USI: 0.91					
52a						46a					
FOUNDATIONS											
ID 1: 1/ [Heated Crawlpace] Concrete Slab & Walls, insulation: below slab = 2.64RSI, interior wall = 2.11RSI, exterior wall = 2.11RSI (configuration #69) // any first storey construction type, interior surface of wall insulated over full-height, exterior surface of wall insulated over full-height, sub-surface of floor slab fully insulated but no insulation											
53a											
Issued: August 22, 2025						67 Page: 2-2 of 3					
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Model: DPLX-01-UNIT 2		3	Site: WEST		6			
Address:		4	Lot:		7			
City & Province: PRINCE RUPERT, BC		5	Postal Code:		8			
CALCULATION RESULTS - ROOM BY ROOM (BTUH)								
#	ROOM NAME	71	HEATING	72	TOTAL COOLING	73		
1	(#1)HEATED CRAWL - U2		2,482		0			
2	(#2)104-ENTRY		1,120		141			
3	(#3)105-POWDER		121		0			
4	(#4)106-LIVING ROOM		578		2,493			
5	(#5)107-KITCHEN/DINING		2,112		2,568			
6	(#6)204-BEDROOM 1		1,398		207			
7	(#7)205-BEDROOM 2		753		329			
8	(#8)206-WASHROOM		92		22			
9	(#9)207-LANDING		1,358		855			
Ventilation Loss (if separate):		1,065	BTUH	74	Latent Gain (if separate, value or multiplier):	1,526	BTUH	75
Total Building Heat Loss (5.2.7):		10,015	BTUH		Nominal Cooling System Capacity (6.3.1):	6,614	BTUH	
See page 1 for heating & Cooling System Capacity Limits				Issued: August 22, 2025	76	Page:	3	of 3
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