

PROJECT INFORMATION

PRCNC20240216



Location
Building owner
Program user
Company
Comments

By **MACDONALD-MILLER FACILITY SOLUTIONS**
Dataset name **C:\Users\townsendg\Documents\TRACE 700 Project\Trane Trace 700 Jobs\72225111 - PSE Puyallup\72225111-R.TRC**

Calculation time **09:32 AM on 10/11/2023**
TRACE® 700 version **6.3.4**

Location **Seattle, Washington**
Latitude **47.0 deg**
Longitude **122.0 deg**
Time Zone **8**
Elevation **386 ft**
Barometric pressure **29.5 in. Hg**

Air density **0.0749 lb/cu ft**
Air specific heat **0.2444 Btu/lb·°F**
Density-specific heat product **1.0988 Btu/h·cfm·°F**
Latent heat factor **4,836.9 Btu·min/h·cu ft**
Enthalpy factor **4.4953 lb·min/hr·cu ft**

Summer design dry bulb **80.0 °F**
Summer design wet bulb **64.0 °F**
Winter design dry bulb **26.0 °F**
Summer clearness number **0.95**
Winter clearness number **0.95**
Summer ground reflectance **0.20**
Winter ground reflectance **0.20**
Carbon Dioxide Level **400 ppm**

Design simulation period **January - December**
Cooling load methodology **CLTD-CLF (ASHRAE TFM)**
Heating load methodology **UATD**



Load / Airflow Summary

By MACDONALD-MILLER FACILITY SOLUTIONS

System	Zone	Room **	Floor Area ft²	People #	Coil	Coil	Space	Air Changes ach/hr	VAV	Main Coil Heating Sensible Btu/h	Heating	Percent OA			
					Cooling Sensible Btu/h	Cooling Total Btu/h	Design Max SA cfm		Minimum SA cfm		Fan Max SA cfm	Clg	Htg		
Alternative 1															
		001 ELECTRIC OPERATIONS TEST LA	Rm Peak	4,475	14.0	55,146	63,404	2,378	1.28	238	10	-68,017	2,140	37.0	37.0
	Zone - 01		Zn Peak	4,475	14.0	55,146	63,404	2,378			10	-68,017	2,140	37.0	37.0
	Zone - 01		Zn Block	4,475	14.0	55,146	63,404	2,378			10	-68,017	2,140	37.0	37.0
		011 FLOW LAB	Rm Peak	1,804	14.0	20,827	26,699	952	2.11	95	10	-27,229	857	48.7	48.7
	Zone - 011		Zn Peak	1,804	14.0	20,827	26,699	952			10	-27,229	857	48.7	48.7
	Zone - 011		Zn Block	1,804	14.0	20,827	26,699	952			10	-27,229	857	48.7	48.7
		012 GAS OP TRAINING	Rm Peak	2,292	11.5	85,419	97,615	3,894	4.08	389	10	-111,393	3,505	13.0	13.0
	Zone - 012		Zn Peak	2,292	11.5	85,419	97,615	3,894			10	-111,393	3,505	13.0	13.0
	Zone - 012		Zn Block	2,292	11.5	85,419	97,615	3,894			10	-111,393	3,505	13.0	13.0
		013 WAREHOUSE N	Rm Peak	1,100	5.5	3,743	4,654	133	0.29	0	0	-3,804	133	64.5	64.5
	Zone - 013		Zn Peak	1,100	5.5	3,743	4,654	133			0	-3,804	133	64.5	64.5
	Zone - 013		Zn Block	1,100	5.5	3,743	4,654	133			0	-3,804	133	64.5	64.5
		014 GAS WORKER LAB	Rm Peak	979	4.9	33,472	36,799	1,513	3.71	151	10	-43,278	1,362	14.3	14.3
	Zone - 014		Zn Peak	979	4.9	33,472	36,799	1,513			10	-43,278	1,362	14.3	14.3
	Zone - 014		Zn Block	979	4.9	33,472	36,799	1,513			10	-43,278	1,362	14.3	14.3
		002 CLASSROOM	Rm Peak	757	16.0	13,307	16,784	599	4.74	60	10	-17,119	539	54.5	54.5
	Zone - 02		Zn Peak	757	16.0	13,307	16,784	599			10	-17,119	539	54.5	54.5
	Zone - 02		Zn Block	757	16.0	13,307	16,784	599			10	-17,119	539	54.5	54.5
		003 CLASSROOM	Rm Peak	771	16.0	11,858	15,255	541	4.21	54	10	-15,465	487	60.7	60.7
	Zone - 03		Zn Peak	771	16.0	11,858	15,255	541			10	-15,465	487	60.7	60.7
	Zone - 03		Zn Block	771	16.0	11,858	15,255	541			10	-15,465	487	60.7	60.7
		004 CLASSROOM	Rm Peak	1,025	24.0	16,988	21,891	776	4.54	78	10	-22,183	698	60.8	60.8
	Zone - 04		Zn Peak	1,025	24.0	16,988	21,891	776			10	-22,183	698	60.8	60.8
	Zone - 04		Zn Block	1,025	24.0	16,988	21,891	776			10	-22,183	698	60.8	60.8
CU-R-01			Sys Peak	13,203	105.9	240,759	283,099	10,785				-308,487	9,720	30.4	30.4
CU-R-01			Sys Block	13,203	105.9	236,580	276,967	10,785				-308,487	9,720	30.4	30.4
		015 HUDDLE	Rm Peak	134	4.0	2,347	3,126	110	3.28	11	10	-3,014	99	33.2	33.2
		015 MOTHERS ROOM	Rm Peak	81	1.0	978	1,805	45	2.24	5	10	-1,245	41	28.3	28.3
		015 WORKROOM	Rm Peak	271	4.0	10,035	11,105	459	6.78	46	10	-12,619	413	10.3	10.3
	Zone - 015		Zn Peak	486	9.0	13,360	16,037	614			10	-16,878	553	15.7	15.7
	Zone - 015		Zn Block	486	9.0	13,394	16,026	614			10	-16,878	553	15.7	15.7
		016 CORRIDOR	Rm Peak	4,083	1.0	9,805	12,034	452	0.44	0	0	-12,424	452	70.4	70.4
	Zone - 016		Zn Peak	4,083	1.0	9,805	12,034	452			0	-12,424	452	70.4	70.4
	Zone - 016		Zn Block	4,083	1.0	9,805	12,034	452			0	-12,424	452	70.4	70.4
		005 OPEN OFFICE	Rm Peak	1,488	24.0	26,965	33,259	1,229	3.31	123	10	-33,774	1,107	22.1	22.1

* This report does not display heating only systems.

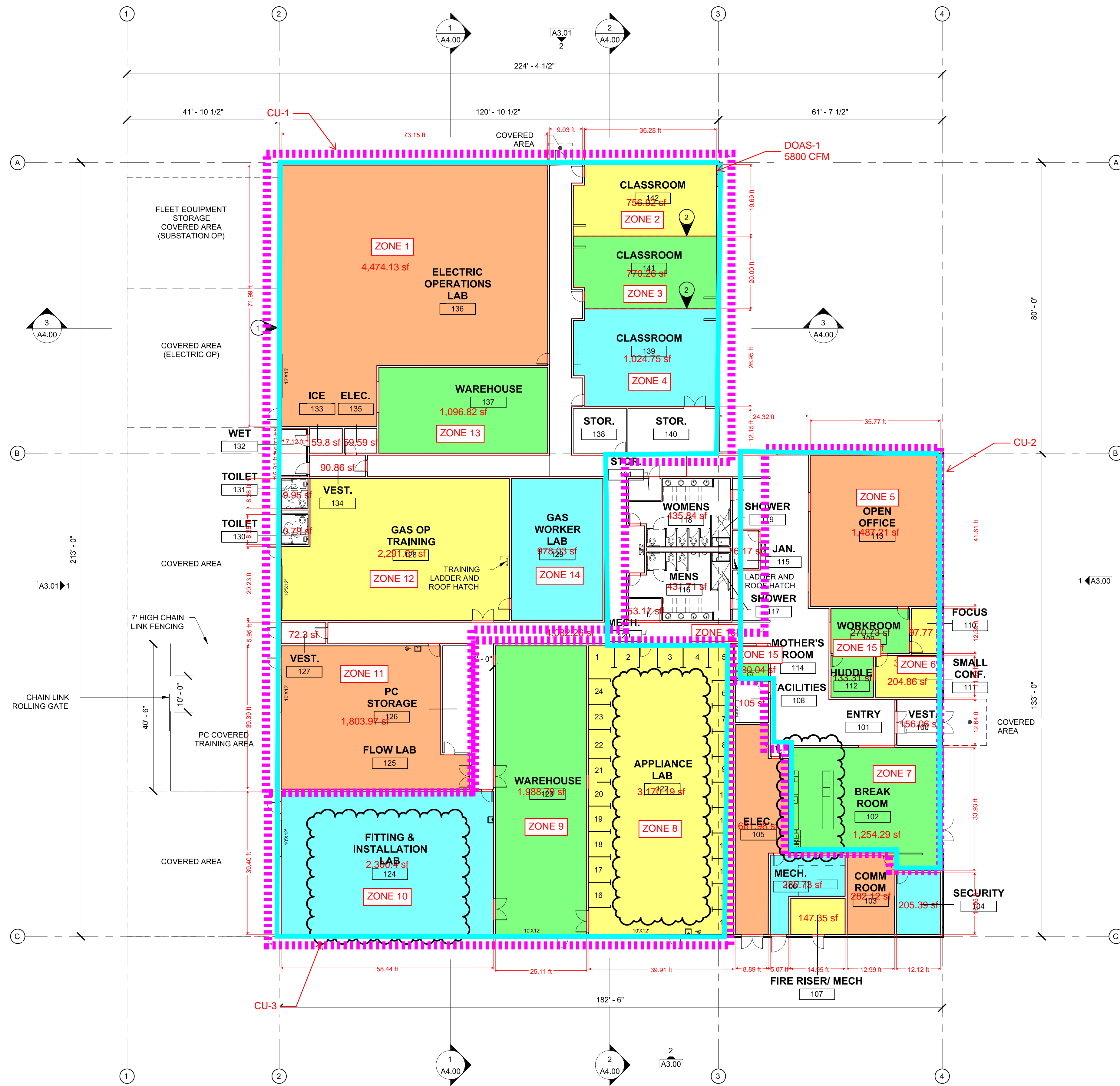
System	Zone	Room **	Floor Area ft²	People #	Coil	Coil	Space	Air Changes ach/hr	VAV	VAV Minimum %	Main Coil	Heating	Percent OA	
					Cooling Sensible Btu/h	Cooling Total Btu/h	Design Max SA cfm		Minimum SA cfm		Heating Sensible Btu/h	Fan Max SA cfm	Clg	Htg
	Zone - 05		1,488	24.0	26,965	33,259	1,229			10	-33,774	1,107	22.1	22.1
	Zone - 05		1,488	24.0	26,965	33,259	1,229			10	-33,774	1,107	22.1	22.1
		006 FOCUS	98	1.0	2,972	3,309	135	5.52	14	10	-3,715	122	10.5	10.5
		006 SMALL CONF	205	8.0	5,994	7,395	276	5.39	28	10	-7,586	249	24.6	24.6
	Zone - 06		303	9.0	8,966	10,704	411			10	-11,301	370	20.0	20.0
	Zone - 06		303	9.0	9,041	10,678	411			10	-11,301	370	20.0	20.0
		007 BREAKROOM	1,255	36.0	45,521	56,360	2,072	6.60	0	0	-56,917	2,072	16.0	16.0
	Zone - 07		1,255	36.0	45,521	56,360	2,072			0	-56,917	2,072	16.0	16.0
	Zone - 07		1,255	36.0	45,521	56,360	2,072			0	-56,917	2,072	16.0	16.0
CU-R-02		Sys Peak	7,615	79.0	104,616	128,394	4,779				-131,295	4,554	23.0	23.0
CU-R-02		Sys Block	7,615	79.0	101,768	126,783	4,779				-131,295	4,554	23.0	23.0
		010 FITTING & INSTALLATION LAB	2,301	18.0	50,793	60,368	2,339	4.07	234	10	-64,246	2,105	25.4	25.4
	Zone - 010		2,301	18.0	50,793	60,368	2,339			10	-64,246	2,105	25.4	25.4
	Zone - 010		2,301	18.0	50,793	60,368	2,339			10	-64,246	2,105	25.4	25.4
		008 APPLIANCE LAB	3,171	18.0	248,940	261,122	11,381	8.61	1,138	10	-312,633	10,243	6.4	6.4
	Zone - 08		3,171	18.0	248,940	261,122	11,381			10	-312,633	10,243	6.4	6.4
	Zone - 08		3,171	18.0	248,940	261,122	11,381			10	-312,633	10,243	6.4	6.4
		009 WAREHOUSE S	1,989	9.9	19,929	23,022	907	1.82	0	0	-24,911	907	17.1	17.1
	Zone - 09		1,989	9.9	19,929	23,022	907			0	-24,911	907	17.1	17.1
	Zone - 09		1,989	9.9	19,929	23,022	907			0	-24,911	907	17.1	17.1
CU-R-03		Sys Peak	7,461	45.9	319,662	344,512	14,626				-401,790	13,254	10.1	10.1
CU-R-03		Sys Block	7,461	45.9	319,229	344,391	14,626				-401,790	13,254	10.1	10.1
		CONTROL HOUSE	400	10.0	52,808	56,800	2,414	36.21	241	10	-66,320	2,173	8.0	8.0
		MAIN ELECTRICAL	662	0.0	55,859	56,268	2,542	15.36	0	0	-69,824	2,542	2.0	2.0
SPLIT SYSTEMS		Sys Peak	1,062	10.0	108,667	113,069	4,956				-136,144	4,715	4.9	4.9
SPLIT SYSTEMS		Sys Block	1,062	10.0	108,266	112,721	4,956				-136,144	4,715	4.9	4.9

* This report does not display heating only systems.

GENERAL NOTES

1. ALL INTERIOR WALLS TYPE "1" UNLESS NOTED OTHERWISE. OMIT GWB ON INTERIOR SIDE OF ALL MECHANICAL AND PLUMBING CHASE WALLS, TYP.
2. WALL DIMENSIONS ARE TO FACE OF STUD AND CONCRETE UNLESS NOTED OTHERWISE, TYP.
3. WHERE DOORS ARE SHOWN NEAR ADJACENT WALL PROVIDE 4" FROM DOOR OPENING TO FACE OF STUD OR CONCRETE UNLESS NOTED OTHERWISE, TYP.
4. FOR CLOCK/SPEAKERS PROVIDE BLOCKING/FRAMING PER MFR., SEE ELEC. FOR DEVICES AND LOCATION, SEE STRUCT. FOR TYPICAL OPENING REQUIREMENTS.
5. THIS FLOOR PLAN WAS GENERATED BASED ON THE INFORMATION GATHERED DURING THE PROGRAMMING PHASE, END USER MEETINGS, ROOM DATA SHEETS, THE FF&E SPREADSHEET, AND PSE COMMENTS. THE FLOOR PLAN SHOWS THE MAIN OTC BUILDING AREAS AND ROOMS. SEE THE ROOM DATA SHEETS AND THE FF&E SPREADSHEET FOR MORE DETAILED REQUIREMENTS AND INFORMATION. THE FLOOR PLAN WILL BE FURTHER DEVELOPED IN UPCOMING DESIGN PHASES (DESIGN DEVELOPMENT, AND CONSTRUCTION DOCUMENTS).
6. BUILDING DATA: OTC BUILDING
 - B OCCUPANCY (VOCATIONAL SCHOOL)
 - 33,938 SF
 - ASSUMED TYPE V-B CONSTRUCTION. FULL IBC 2021 CODE ANALYSIS TO BE PROVIDED WITH THE BUILDING PERMIT

- 1 ELECTRIC FORKLIFT CHARGING STATION
- 2 MOTORIZED OPERABLE WALL



1 Floor Plan
1/16" = 1'-0"

SCHEMATIC DESIGN

REV	ISSUED FOR	DATE
1	Revision 1	Date 1

NORTH PLAN
SCALE:
1/16" = 1'-0"

PSE OPERATIONAL TRAINING CENTER

OTC BUILDING FLOOR PLAN

PROJECT:	202202.06
DRAWN:	MR CHECK: AK
ISSUED:	7/21/23

A2.01