

Jackson Barracks 141st Field Artillery Battalion Readiness Center

**Building Outside Air & Exhaust Air For Build Balance**

**May 3, 2006**

**35% Design Submittal**

*Lucien T. Vivien, Jr. & Associates, Inc.*



Job: Jackson Barracks 141 Readness Center

Exhaust air Calculation

Floor	Room	Ft <sup>2</sup>	CFM/ft <sup>2</sup>	Fixtures	CFM/Fixture	Exhaust air/ft <sup>2</sup>	Exhaust air/fixture
1st	Janitor 114	82	1	0	0	82	0
	Men RR 104	260	0	8	50	0	400
	Women RR 105	260	0	8	50	0	400
						0	0
2nd	Men RR 204	260	0	4	50	0	200
	Women RR 205	260	0	4	50	0	200
	Janitor 228		1	0	0	0	0
	Vault 212	1200	1	0	0	1200	0
	Women Shower 217	736	1	0	50	736	0
	Women Lockers 217	965	1	0	50	965	0
	Women Toilet 216	435	0	8	50	0	400
	Men Shower 219	630	1	0	50	630	0
	Men Lockers 219	1260	1	0	50	1260	0
	Men Toilet 218	600	0	6	50	0	300
	Men Shower 221	690	1	0	50	690	0
	Men Lockers 221	4340	1	0	50	4340	0
	Men Toilet 220	740	0	8	50	0	400
	Janitor 224	45	1	0	0	45	0
						0	0
3rd	Men RR 304	260	0	4	50	0	200
	Women RR 305	260	0	4	50	0	200
						0	0
4th	Men RR 404	204	0	2	50	0	100
	Women RR 405	204	0	2	50	0	100
Sub total						9948	2900
Total exhaust air:						12848	

**141<sup>st</sup> Building Air Balance**

Min outside air

(Total exhaust air)\* 1.2 =

15418

**Central Plant exhaust ASHRAE 15-2004**

Refrigerant ventilation rate

$$Q=100 *G^{0.5}$$

G= 1989 lbs of Refrig

Q= 4460 CFM

General ventilation

ventilation rate

0.5 CFM/ft<sup>2</sup>

area

3600 ft<sup>2</sup>

Total General Ventilation

1800 CFM