Appendix G: "Greening" of Hotels Research

The Initial Survey, Concluding Survey, all results, and the R.S. Means cut sheets can be found on the following pages.

Name: _____ **Company:** _____

Rate the following on a Scale of 1 to 10 based on level of FAMILARITY
(10 being Extremely Familiar; 1 being Not at All Familiar)

Leadership in Energy and Environmental Design (LEED) Rating System

1 2 3 4 5 6 7 8 9 10

Environmentally Friendly (GREEN) Building Technologies

1 2 3 4 5 6 7 8 9 10

How many projects have you been associated with that have employed GREEN Technologies?

☐ 1 to 5 ☐ 5 to 10 ☐ 10 or more

Do you feel that by implementing GREEN Technologies the total cost of the project was increased?

☐ Yes ☐ No

If yes, how much of the total cost?

☐ 1 - 5%
☐ 5 - 10%
☐ 10% or more

Was the extra cost worth it? Why?

☐ Yes
☐ No

How many projects have you been associated with that have employed LEED?

☐ 1 to 5 ☐ 5 to 10 ☐ 10 or more

Do you feel that by implementing LEED the total cost of the project was increased?

*Disregard any cost associated with documentation, focus only on building cost.

☐ Yes ☐ No

If yes, how much of the total cost?

☐ 1 - 5%
☐ 5 - 10%
☐ 10% or more

Was the extra cost worth it? Why?

☐ Yes
☐ No

Based on your experience with GREEN Technologies, check which cost is greater/longer between each set:

	Up Front Cost	**Payback Period**	**Life Cycle Cost**
Colored Clay Plaster	☐	☐	☐
Painted Gypsum Board	☐	☐	☐
Blown Cellulose Insulation	☐	☐	☐
Fiberglass Batting Insulation	☐	☐	☐
Polished Concrete Floor	☐	☐	☐
Ceramic Tile Floor	☐	☐	☐
Pre-Prgrammed A/C Units	☐	☐	☐
Continuously Powered A/C Units	☐	☐	☐
Greywater System	☐	☐	☐
Normal Sanitary System	☐	☐	☐

The most cost effective project implements:

☐ LEED
☐ GREEN Technologies
☐ Neither

Name: JOEL VANDERLEY **Company:** MILLER GLOBAL

Rate the following on a Scale of 1 to 10 based on level of FAMILARITY
(10 being Extremely Familiar; 1 being Not at All Familiar)

Leadership in Energy and Environmental Design (LEED) Rating System

1 2 3 4 (5) 6 7 8 9 10

Environmentally Friendly (GREEN) Building Technologies

1 2 3 4 (5) 6 7 8 9 10

How many projects have you been associated with that have employed GREEN Technologies?

[X] 1 to 5 [ ] 5 to 10 [ ] 10 or more

Do you feel that by implementing GREEN Technologies the total cost of the project was increased?

[X] Yes [ ] No

If yes, how much of the total cost?

[X] 1 - 5%
[ ] 5 - 10%
[ ] 10% or more

Was the extra cost worth it? Why?

[X] Yes ① PAYBACK
[ ] No ② COMPLIANCE

How many projects have you been associated with that have employed LEED?

[X] 1 to 5 [ ] 5 to 10 [ ] 10 or more

Do you feel that by implementing LEED the total cost of the project was increased?

*Disregard any cost associated with documentation, focus only on building cost.

[X] Yes [ ] No

If yes, how much of the total cost?

[X] 1 - 5%
[ ] 5 - 10%
[ ] 10% or more

Was the extra cost worth it? Why?

[X] Yes COMPLIANCE
[ ] No

Based on your experience with GREEN Technologies, check which cost is greater/longer between each set:

	Up Front Cost	Payback Period	Life Cycle Cost
Colored Clay Plaster	X		
Painted Gypsum Board		X	X
Blown Cellulose Insulation DIFF IN COST IS NEGLIGABLE			
Fiberglass Batting Insulation			
Polished Concrete Floor	X		X
Ceramic Tile Floor		X	
Pre-Prgrammed A/C Units	X	X	X
Continuously Powered A/C Units			
Greywater System	X		
Normal Sanitary System		X	X

The most cost effective project implements:

[ ] LEED
[X] GREEN Technologies
[ ] Neither

3/18/08 PHONE INTERVIEW

Name: DON RIEGEL **Company:** RIEGEL CONSULTING

Rate the following on a Scale of 1 to 10 based on level of FAMILARITY
(10 being Extremely Familiar; 1 being Not at All Familiar)

Leadership in Energy and Environmental Design (LEED) Rating System

1 2 3 4 5 6 7 **(8)** 9 10

Environmentally Friendly (GREEN) Building Technologies

1 2 3 **(4)** 5 6 7 8 9 10

How many projects have you been associated with that have employed GREEN Technologies?

[✓] 1 to 5 [ ] 5 to 10 [ ] 10 or more

Do you feel that by implementing GREEN Technologies the total cost of the project was increased?

[X] Yes [ ] No

If yes, how much of the total cost?

[ ] 1 - 5%
[ ] 5 - 10%
[X] 10% or more

Was the extra cost worth it? Why?

[ ] Yes
[X] No - GOV'T OFFICE BLDGS.
- COMPLIANCE.
- LONG PAYBACK (MORE THAN 2YRS.)
- MAIN INTEREST FOR ECONOMIC SENSE.

How many projects have you been associated with that have employed LEED?

[ ] 1 to 5 [X] 5 to 10 [ ] 10 or more

Do you feel that by implementing LEED the total cost of the project was increased?

*Disregard any cost associated with documentation, focus only on building cost.

[X] Yes [ ] No

If yes, how much of the total cost?

[ ] 1 - 5%
[ ] 5 - 10%
[X] 10% or more

Was the extra cost worth it? Why?

[X] Yes → OWNER OCCUPIED.
-GOVT MANDATED.
[X] No → SPEC OFFICES
-SHORT OWNERSHIP.

Based on your experience with GREEN Technologies, check which is greater:

	Up Front Cost	Payback Period	Life Cycle Cost
Colored Clay Plaster / Painted Gypsum Board N/A	[ ] / [ ]	[ ] / [ ]	[ ] / [ ]
Blown Cellulose Insulation / Fiberglass Batting Insulation	[ ] / [X]	[ ] / [X]	[X] / [ ] BETTER.
Polished Concrete Floor / Ceramic Tile Floor	[ ] / [X]	[ ] / [X]	[ ] / [X]
Pre-Prgrammed A/C Units / Continuously Powered A/C Units	[ ] / [ ] SAME	[ ] / [X]	[ ] / [X]
Greywater System / Normal Sanitary System	[X] / [ ]	[X] / [ ]	[ ] / [ ] LOWER.

The most cost effective project implements:

[X] LEED → MUST HAVE ENERGY CONSERVATION - BEAT ASHRAE 90.1
[ ] GREEN Technologies
[ ] Neither

Name: Stephen Smith Company: DavisCarterScott

Rate the following on a Scale of 1 to 10 based on level of FAMILARITY
(10 being Extremely Familiar; 1 being Not at All Familiar)

Leadership in Energy and Environmental Design (LEED) Rating System

1 2 3 4 5 6 **7** 8 9 10

Environmentally Friendly (GREEN) Building Technologies

1 2 3 4 **5** 6 7 8 9 10

How many projects have you been associated with that have employed GREEN Technologies?

☑ 1 to 5 (1) ☐ 5 to 10 ☐ 10 or more

Do you feel that by implementing GREEN Technologies the total cost of the project was increased?

☑ Yes (2) ☐ No

If yes, how much of the total cost?

☑ 1 - 5%
☑ 5 - 10%
☑ 10% or more

Was the extra cost worth it? Why? (3)

☐ Yes
☐ No

How many projects have you been associated with that have employed LEED?

☐ 1 to 5 ☑ 5 to 10 (1) ☐ 10 or more

Do you feel that by implementing LEED the total cost of the project was increased?

*Disregard any cost associated with documentation, focus only on building cost.

☑ Yes (2) ☐ No

If yes, how much of the total cost?

☑ 1 - 5% CERTIFIED
☑ 5 - 10% SILVER - GOLD
☑ 10% or more GOLD - PLATINUM

Was the extra cost worth it? Why? (3)

☐ Yes
☐ No

Based on your experience with GREEN Technologies, check which cost is greater/longer between each set:

	Up Front Cost	Payback Period	Life Cycle Cost
Colored Clay Plaster — NO EXPERIENCE Painted Gypsum Board	☐ ☑	☐ ☑	☐ ☑ DEPENDS ON USE OF THE SPACE
Blown Cellulose Insulation Fiberglass Batting Insulation	☐ ☑	☐ ☑	☐ ☒ NA
Polished Concrete Floor Ceramic Tile Floor	☑ ☐	☑ ☐	☒ ☐ Depends on space/client requirements
Pre-Prgrammed A/C Units (4) Continuously Powered A/C Units	☐ ☐	☐ ☐	☐ ☐
Greywater System Normal Sanitary System (5)	☑ ☐	☑ ☐	☐ ☐

The most cost effective project implements:

☐ LEED
☐ GREEN Technologies
☐ Neither

Name: Kathy Lawson **Company:** Davis Carter Scott Ltd

Rate the following on a Scale of 1 to 10 based on level of FAMILARITY
(10 being Extremely Familiar; 1 being Not at All Familiar)

Leadership in Energy and Environmental Design (LEED) Rating System

1 2 3 4 5 6 7 8 9 (10)

Environmentally Friendly (GREEN) Building Technologies

1 2 3 4 5 6 7 8 (9) 10

How many projects have you been associated with that have employed GREEN Technologies?

[ ] 1 to 5 [x] 5 to 10 [ ] 10 or more

Do you feel that by implementing GREEN Technologies the total cost of the project was increased?

[ ] Yes [ ] No [x] Sometimes

If yes, how much of the total cost?

[x] 1 - 5%
[ ] 5 - 10%
[ ] 10% or more

Was the extra cost worth it? Why?

[x] Yes
[ ] No

How many projects have you been associated with that have employed LEED?

[x] 1 to 5 [ ] 5 to 10 [ ] 10 or more

Do you feel that by implementing LEED the total cost of the project was increased?

*Disregard any cost associated with documentation, focus only on building cost.

[ ] Yes [ ] No [x] Sometimes

If yes, how much of the total cost?

[x] 1 - 5%
[ ] 5 - 10%
[ ] 10% or more

Was the extra cost worth it? Why?

[x] Yes
[ ] No

Based on your experience with GREEN Technologies, check which cost is greater/longer between each set:

	Up Front Cost	Payback Period	Life Cycle Cost
Colored Clay Plaster	x	x	x
Painted Gypsum Board			
Blown Cellulose Insulation	x	x	
Fiberglass Batting Insulation			x
Polished Concrete Floor			
Ceramic Tile Floor	x	x	x
Pre-Prgrammed A/C Units	x	x	
Continuously Powered A/C Units			x
Greywater System	x	x	
Normal Sanitary System			x

The most cost effective project implements:

[ ] LEED
[x] GREEN Technologies
[ ] Neither

Name: Genelle McDonald **Company:** Balfour Beatty Construction

Rate the following on a Scale of 1 to 10 based on level of FAMILIARITY
(10 being Extremely Familiar; 1 being Not at All Familiar)

Leadership in Energy and Environmental Design (LEED) Rating System

1 2 3 4 5 6 7 (8) 9 10

Environmentally Friendly (GREEN) Building Technologies

1 2 3 4 5 6 7 8 9 10

How many projects have you been associated with that have employed GREEN Technologies?

☑ 1 to 5 ☐ 5 to 10 ☐ 10 or more

Do you feel that by implementing GREEN Technologies the total cost of the project was increased?

☐ Yes ☑ No

If yes, how much of the total cost?

☐ 1 - 5%
☐ 5 - 10%
☐ 10% or more

Was the extra cost worth it? Why?

☐ Yes
☐ No

How many projects have you been associated with that have employed LEED?

☐ 1 to 5 ☑ 5 to 10 ☐ 10 or more

Do you feel that by implementing LEED the total cost of the project was increased?

*Disregard any cost associated with documentation, focus only on building cost.

☑ Yes ☐ No

If yes, how much of the total cost?

☑ 1 - 5%
☐ 5 - 10%
☐ 10% or more

Was the extra cost worth it? Why?

☐ Yes
☐ No

Based on your experience with GREEN Technologies, check which cost is greater/longer between each set:

	Up Front Cost	Payback Period	Life Cycle Cost
Colored Clay Plaster	☑	☐	☐
Painted Gypsum Board	☐	☐	☐
Blown Cellulose Insulation	☑	☐	☐
Fiberglass Batting Insulation	☐	☐	☐
Polished Concrete Floor	☐	☐	☐
Ceramic Tile Floor	☑	☐	☐
Pre-Prgrammed A/C Units	☐	☐	☐
Continuously Powered A/C Units	☐	☐	☐
Greywater System	☑	☐	☐
Normal Sanitary System	☐	☐	☐

The most cost effective project implements:

☐ LEED
☐ GREEN Technologies
☐ Neither

Technology	Material Up Front Cost	Installed Cost (labor)	Total Cost	Life Cost	Product Life (Yrs.)	Choose One
Colored Clay Plaster	0.21 $/SF	7.8 $/SF	8.01 $/SF	0.11 $/SF/Yr	75	
Painted Gypsum Board	0.35 $/SF	3 $/SF	3.35 $/SF	0.13 $/SF/Yr	25	
Blown Cellulose Insulation	1.45 $/CF	1.52 $/CF	2.97 $/CF	0.10 $/CF/Yr	30	
Fiberglass Batting Insulation	0.7 $/SF	0.27 $/SF	0.97 $/SF	0.06 $/SF/Yr	15	
Polished Concrete Floor	1.75 $/SF	7.25 $/SF	9 $/SF	0.09 $/SF/Yr	Building Life	
Ceramic Tile Floor	8.44 $/SF	3.26 $/SF	11.7 $/SF	0.23 $/SF/Yr	50	
Pre-Prgrammed A/C Units*	98 $/Unit	$50,000.00	$68,522.00	362.55 $/Unit	n/a	
Continuously Powered A/C Units	30 $/Unit	$32,230.00	$37,900.00	200.53 $/Unit	n/a	
Greywater System*	n/a	n/a	Add $150,000	n/a	Building Life	
Normal Sanitary System	n/a	n/a	n/a	n/a	Building Life	

Building Life is assumed to be 100 years.

Pre-Prgrammed A/C Units*	Saves 696,241.5 kWh/Year = $2,312.94 /Year
Greywater System*	Saves 355,656 Gallons of Water/Year = $487.25 /Year

Technology	Material Up Front Cost	Installed Cost (labor)	Total Cost	Life Cost	Product Life (Yrs.)	Choose One
Colored Clay Plaster	0.21 $/SF	7.8 $/SF	8.01 $/SF	0.11 $/SF/Yr	75	
Painted Gypsum Board	0.35 $/SF	3 $/SF	3.35 $/SF	0.13 $/SF/Yr	25	
Blown Cellulose Insulation	1.45 $/CF	1.52 $/CF	2.97 $/CF	0.10 $/CF/Yr	30	
Fiberglass Batting Insulation	0.7 $/SF	0.27 $/SF	0.97 $/SF	0.06 $/SF/Yr	15	
Polished Concrete Floor	1.75 $/SF	7.25 $/SF	9 $/SF	0.09 $/SF/Yr	Building Life	
Ceramic Tile Floor	8.44 $/SF	3.26 $/SF	11.7 $/SF	0.23 $/SF/Yr	50	
Pre-Prgrammed A/C Units*	98 $/Unit	$50,000.00	$68,522.00	362.55 $/Unit	n/a	✓ JV
Continuously Powered A/C Units	30 $/Unit	$32,230.00	$37,900.00	200.53 $/Unit	n/a	
Greywater System*	n/a	n/a	Add $150,000	n/a	Building Life	
Normal Sanitary System	n/a	n/a	n/a	n/a	Building Life	

Building Life is assumed to be 100 years.

Pre-Prgrammed A/C Units*	Saves 75,810,749.85 kWh/Year = $252,782.63 /Year
Greywater System*	Saves 355,656 Gallons of Water/Year = $244,691.33 /Year
	First year net savings = $94,637.98

Technology	Material Up Front Cost	Installed Cost (labor)	Total Cost	Life Cost	Product Life (Yrs.)	Choose One
Colored Clay Plaster	0.21 $/SF	7.8 $/SF	8.01 $/SF	0.11 $/SF/Yr	75	
Painted Gypsum Board	0.35 $/SF	3 $/SF	3.35 $/SF	0.13 $/SF/Yr	25	*
Blown Cellulose Insulation	1.45 $/CF	1.52 $/CF	2.97 $/CF	0.10 $/CF/Yr	30	
Fiberglass Batting Insulation	0.7 $/SF	0.27 $/SF	0.97 $/SF	0.06 $/SF/Yr	15	*
Polished Concrete Floor	1.75 $/SF	7.25 $/SF	9 $/SF	0.09 $/SF/Yr	Building Life	*
Ceramic Tile Floor	8.44 $/SF	3.26 $/SF	11.7 $/SF	0.23 $/SF/Yr	50	
Pre-Prgrammed A/C Units*	98 $/Unit	$50,000.00	$68,522.00	362.55 $/Unit	n/a	*
Continuously Powered A/C Units	30 $/Unit	$32,230.00	$37,900.00	200.53 $/Unit	n/a	
Greywater System*	n/a	n/a	Add $150,000	n/a	Building Life	
Normal Sanitary System	n/a	n/a	n/a	n/a	Building Life	*

Building Life is assumed to be 100 years.

Pre-Prgrammed A/C Units*	Saves 696,241.5 kWh/Year = $2,312.94 /Year
Greywater System*	Saves 355,656 Gallons of Water/Year = $487.25 /Year

	Technology	Material Up Front Cost	Installed Cost (labor)	Total Cost	Life Cost	Product Life (Yrs.)	Choose One
1)	Colored Clay Plaster	0.21 $/SF	7.8 $/SF	8.01 $/SF	0.11 $/SF/Yr	75	
	Painted Gypsum Board	0.35 $/SF	3 $/SF	3.35 $/SF	0.13 $/SF/Yr	25	X
2)	Blown Cellulose Insulation	1.45 $/CF	1.52 $/CF	2.97 $/CF	0.10 $/CF/Yr	30	
	Fiberglass Batting Insulation	0.7 $/SF	0.27 $/SF	0.97 $/SF	0.06 $/SF/Yr	15	X
3)	Polished Concrete Floor	1.75 $/SF	7.25 $/SF	9 $/SF	0.09 $/SF/Yr	Building Life	X
	Ceramic Tile Floor	8.44 $/SF	3.26 $/SF	11.7 $/SF	0.23 $/SF/Yr	50	X
4)	Pre-Prgrammed A/C Units*	98 $/Unit	$50,000.00	$68,522.00	362.55 $/Unit	n/a	X
	Continuously Powered A/C Units	30 $/Unit	$32,230.00	$37,900.00	200.53 $/Unit	n/a	
5)	Greywater System*	n/a	n/a	Add $150,000	n/a	Building Life	X
	Normal Sanitary System	n/a	n/a	n/a	n/a	Building Life	

> DEPENDS ON APPLICATION

Building Life is assumed to be 100 years.

Pre-Prgrammed A/C Units*	Saves 75,810,749.85 kWh/Year = $252,782.63 /Year
Greywater System*	Saves 355,656 Gallons of Water/Year = $244,691.33 /Year
	First year net savings = $94,637.98

1) PAINTED GYP. BOARD - LOWER INITIAL COST, EASY MAINTENANCE.

2) FIBERGLASS BATT. - CELLULOSE IS BETTER PRODUCT FOR ENERGY EFFICIENCY, BUT IT IS VERY DIFFICULT TO JUSTIFY THE SIGNIFICANT COST INCREASE TO THE DEVELOPER.

3) POLISHED CONCRETE OR TILE - I LIKE BOTH FINISHES HOWEVER POLISHED CONCRETE ~~IS NOT~~ HAS LIMITED APPLICATION BECAUSE IT DOES NOT FIT W/ ALL ARCHITECTURAL STYLES.

4) PRE-PROGRAMMED - IF WE CAN CONVINCE THE CLIENT TO PAY THE UPFRONT COST, I PREFER PRE-PROGRAM B/C OF THE ENERGY SAVINGS.

5) GREYWATER SYSTEM - OFFERS SIGNIFICANT WATER SAVINGS, BUT TYPICALLY NOT USED BECAUSE OF UPFRONT COST.

Technology	Material Up Front Cost	Installed Cost (labor)	Total Cost	Life Cost	Product Life (Yrs.)	Choose One
Colored Clay Plaster	0.21 $/SF	7.8 $/SF	8.01 $/SF	0.11 $/SF/Yr	75	
Painted Gypsum Board	0.35 $/SF	3 $/SF	3.35 $/SF	0.13 $/SF/Yr	25	X
Blown Cellulose Insulation	1.45 $/CF	1.52 $/CF	2.97 $/CF	0.10 $/CF/Yr	30	X
Fiberglass Batting Insulation	0.7 $/SF	0.27 $/SF	0.97 $/SF	0.06 $/SF/Yr	15	
Polished Concrete Floor	1.75 $/SF	7.25 $/SF	9 $/SF	0.09 $/SF/Yr	Building Life	X
Ceramic Tile Floor	8.44 $/SF	3.26 $/SF	11.7 $/SF	0.23 $/SF/Yr	50	
Pre-Prgrammed A/C Units*	98 $/Unit	$50,000.00	$68,522.00	362.55 $/Unit	n/a	X
Continuously Powered A/C Units	30 $/Unit	$32,230.00	$37,900.00	200.53 $/Unit	n/a	
Greywater System*	n/a	n/a	Add $150,000	n/a	Building Life	X
Normal Sanitary System	n/a	n/a	n/a	n/a	Building Life	

Building Life is assumed to be 100 years.

Pre-Prgrammed A/C Units*	Saves 75,810,749.85 kWh/Year = $252,782.63 /Year
Greywater System*	Saves 355,656 Gallons of Water/Year = $244,691.33 /Year
	First year net savings = $94,637.98

1. I chose gyp board over plater due to up front costs. For commercial use, most people anticipate renovating their spaces every so often, so the long product expectancy is of little benefit.

2. I chose blown cellulose insulation because the per square foot costs for cellulose vs. fiberglass are about the same. In other words, there is no reason not to use it.

3. I chose polished concrete over tile for the lower up front cost as well as the ease of maintenance. Plus, it is easier to renovate space with polished concrete vs. tile - no demolition required.

4. I chose the pre-programmed A/C units and greywater system due to the energy savings, which provide sufficient savings to offset the up front costs in a short time.

Initial Survey Comments:

Architect:
I think that some of the items on the questionnaire, will not relate a true answer, so here are a few of my comments too. Please note that these are my personal opinions, and do not convey an official DCS company opinion or policy.
1. How many projects... I have always tried to initiate responsible design into my projects, long before "LEED " or "Green" became household names. So, in all my projects, about 200 over the last 26 years, I have implemented many of the same principals as what is required by LEED or Green today.
2. Cost.... On the Mill Road Marriott project, we are providing the city with documentation of twenty LEED points, BBC has told us this is at no premium cost. However, on other projects I know that the owner has certainly paid significant premiums to achieve the silver, gold or platinum levels.
3. Worth it?.... In monetary pay back, perhaps not.
In environmental impact most likely yes.
In employee satisfaction, probably but maybe not.
4. What is a continuously powered AC unit? All HVAC units are thermostatically controlled - on when needed to be on, off when not needed.
5. Greywater systems are very expensive to build. And again it depends on the use of the building. I am currently working on a school where we are looking into using a greywater system. We have looked at both building greywater, and also saving storm water runoff. The cost of providing what essentially amounts to two sets of sanitary piping systems in the building is huge and not advantageous to the client. Since this is a high school, with exterior athletic playing fields, they cannot generate enough water to make much of a difference. They would have to hope for extraordinary rainfall. the Mill Road Marriott is the opposite. They have such a small amount of planting to be watered, the greywater system would require more cost in system maintenance than what would be saved instead of using city water.

Concluding Survey Comments:

Architect:
1. Plaster- Gypsum Board: Most buildings don't really last much more than 20 to 25 years. The IRS has an owner depreciate them over time, and by the time you get to 30 years, the owner is ready to tear it down and build anew. Now many businesses plan on staying in one location for more than 20 years. If they do, then the usually want to do a building make over and change colors. With this in mind, there is not much savings to go with colored clay plaster.
2. Insulation - I see no reason to go with blown cellulose instead of fiberglass insulation. The wall cavities are a given thickness (4" studs, 6" studs, etc) and batt insulation is manufactured in the appropriate thicknesses to suit the stud space. There is a new sprayed on expanding foam insulation, that has a lot of promise. As a sprayed on product, it seals around all holes and gaps and provides better insulation per inch than the fiberglass.
3. Floor - I am intrigued with the polished concrete floor, but have not been able to use this yet. This appears to be a good saving and a durable solution. Unfortunately this gives your building an industrial look that many clients don't want.
4. A/C units. I am not sure what you mean by continuously powered. I am not sure we ever do this in any of our projects. All of the buildings I have done in the last 10 years have had thermostatically controlled operation that has a night setback.
5. A greywater system has a lot of costs associated with it. I am no sure how you got the number $150,000. These usually also have a pump and filter system that requires maintenance.

I am now working on a 60,000 sf addition to an elementary school. They want the project to be LEED certified. We looked at a greywater system, and determined it to have a cost of close to $500,000 to

connect all toilets and roof drains and store the water in an underground storage tank. If this was a developer, he would have had to borrow money to pay for this which would have resulted in a cost of $1,500,000 over thirty years, negating any savings. The good news is that we have about 40 possible points and need only 29 for a school to be certified.

Owner:
First, my selection is Pre-programmed A/C units. We have already implemented this for Mill Rd.

Second, my choice is based primarily on short term payback and lower operating costs

Third, my second choice would be a Greywater system. I question the payback you've calculated as I believe the original cost would be much higher but that's just my gut feel. Additionally, jurisdictional approval would be problematic.

Plaster is a wonderful product but is nearly impossible to patch correctly. Over the years, renovations, installation of new technology, etc. would make everything look like a patchwork quilt. Add to that the fact that you can't find any tradesmen it is not realistic.

Insulation changes don't really have a payback.

Concrete polished floors are great but elevation changes between rooms of different flooring types would create havoc during construction and in 7 years you renovate and add tile anyway. The payback isn't there and the headaches aren't worth it.

09 30 13.10 Ceramic Tile

		Crew	Daily Output	Labor-Hours	Unit	2008 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
0010	**CERAMIC TILE**									
0050	Base, using 1' x 4" high pc. with 1" x 1" tiles, mud set	D-7	82	.195	L.F.	4.48	6.45		10.93	14.40
0100	Thin set	"	128	.125		4.26	4.14		8.40	10.75
0300	For 6" high base, 1" x 1" tile face, add					.70			.70	.77
0400	For 2" x 2" tile face, add to above					.37			.37	.41
0600	Cove base, 4-1/4" x 4-1/4" high, mud set	D-7	91	.176		3.54	5.80		9.34	12.45
0700	Thin set		128	.125		3.56	4.14		7.70	9.95
0900	6" x 4-1/4" high, mud set		100	.160		3.23	5.30		8.53	11.30
1000	Thin set		137	.117		3.23	3.86		7.09	9.20
1200	Sanitary cove base, 6" x 4-1/4" high, mud set		93	.172		3.61	5.70		9.31	12.30
1300	Thin set		124	.129		4.11	4.27		8.38	10.75
1500	6" x 6" high, mud set		84	.190		4.47	6.30		10.77	14.15
1600	Thin set		117	.137		4.47	4.52		8.99	11.55
1800	Bathroom accessories, average		82	.195	Ea.	10.35	6.45		16.80	21
1900	Bathtub, 5', rec. 4-1/4" x 4-1/4" tile wainscot, adhesive set 6' high		2.90	5.517		156	183		339	440
2100	7' high wainscot		2.50	6.400		179	212		391	505
2200	8' high wainscot		2.20	7.273		190	241		431	565
2400	Bullnose trim, 4-1/4" x 4-1/4", mud set		82	.195	L.F.	3.35	6.45		9.80	13.15
2500	Thin set		128	.125		3.12	4.14		7.26	9.50
2700	6" x 4-1/4" bullnose trim, mud set		84	.190		2.54	6.30		8.84	12.05
2800	Thin set		124	.129		2.54	4.27		6.81	9.05
3255	Floors, glazed, thin set, 6" x 6", color group 1		200	.080	S.F.	3.36	2.65		6.01	7.60
3260	8" x 8" tile		250	.064		3.36	2.12		5.48	6.80
3270	12" x 12" tile		325	.049		4.22	1.63		5.85	7.05
3280	16" x 16" tile		550	.029		6.05	.96		7.01	8.05
3285	Border, 6" x 12" tile		275	.058		11.10	1.92		13.02	15
3290	3" x 12" tile		200	.080		32.50	2.65		35.15	40
3300	Porcelain type, 1 color, color group 2, 1" x 1"		183	.087		4.57	2.89		7.46	9.30
3310	2" x 2" or 2" x 1", thin set		190	.084		5.05	2.79		7.84	9.65
3350	For random blend, 2 colors, add					.85			.85	.94
3360	4 colors, add					1.20			1.20	1.32
3370	For color group 3, add					.49			.49	.54
3380	For abrasive non-slip tile, add					.48			.48	.53
4300	Specialty tile, 4-1/4" x 4-1/4" x 1/2", decorator finish	D-7	183	.087		10	2.89		12.89	15.25
4500	Add for epoxy grout, 1/16" joint, 1" x 1" tile		800	.020		.60	.66		1.26	1.63
4600	2" x 2" tile		820	.020		.54	.65		1.19	1.54
4800	Pregrouted sheets, walls, 4-1/4" x 4-1/4", 6" x 4-1/4"									
4810	and 8-1/2" x 4-1/4", 4 S.F. sheets, silicone grout	D-7	240	.067	S.F.	4.59	2.21		6.80	8.30
5100	Floors, unglazed, 2 S.F. sheets,									
5110	Urethane adhesive	D-7	180	.089	S.F.	4.57	2.94		7.51	9.35
5400	Walls, interior, thin set, 4-1/4" x 4-1/4" tile		190	.084		2.22	2.79		5.01	6.55
5500	6" x 4-1/4" tile		190	.084		2.51	2.79		5.30	6.85
5700	8-1/2" x 4-1/4" tile		190	.084		3.55	2.79		6.34	8
5800	6" x 6" tile		200	.080		3.03	2.65		5.68	7.20
5810	8" x 8" tile		225	.071		4.04	2.35		6.39	7.90
5820	12" x 12" tile		300	.053		3.25	1.76		5.01	6.15
5830	16" x 16" tile		500	.032		3.52	1.06		4.58	5.40
5900	Decorated wall tile, 4-1/4" x 4-1/4", minimum		270	.059		3.34	1.96		5.30	6.55
6000	Maximum		180	.089		42.50	2.94		45.44	51
6100	Exterior walls, frostproof, mud set, 4-1/4" x 4-1/4"		102	.157		6	5.20		11.20	14.20
6200	1-3/8" x 1-3/8"		93	.172		4.13	5.70		9.83	12.90
6300	Crystalline glazed, 4-1/4" x 4-1/4", mud set, plain		100	.160		3.66	5.30		8.96	11.80
6500	4-1/4" x 4-1/4", scored tile		100	.160		4.42	5.30		9.72	12.60

Hotel, 8-24 Story

Model costs calculated for a 15 story building with 10′ story height and 450,000 square feet of floor area

				Unit	Unit Cost	Cost Per S.F.	% Of Sub-Total
A. SUBSTRUCTURE							
1010	Standard Foundations	CIP concrete pile caps		S.F. Ground	5.25	.35	6.6%
1020	Special Foundations	Steel H-piles, concrete grade beams		S.F. Ground	95	6.30	
1030	Slab on Grade	4″ reinforced concrete with vapor barrier and granular base		S.F. Slab	4.45	.30	
2010	Basement Excavation	Site preparation for slab, piles and grade beams		S.F. Ground	.14	.01	
2020	Basement Walls	4′ foundation wall		L.F. Wall	69	.15	
B. SHELL							
	B10 Superstructure						
1010	Floor Construction	Open web steel joists, slab form, concrete, columns		S.F. Floor	17.63	16.45	15.8%
1020	Roof Construction	Metal deck, open web steel joists, beams, columns		S.F. Roof	7.50	.50	
	B20 Exterior Enclosure						
2010	Exterior Walls	N/A		—	—	—	5.3 %
2020	Exterior Windows	Glass and metal curtain walls	*100% of wall*	Each	20.80	5.55	
2030	Exterior Doors	Glass and metal doors and entrances		Each	2582	.19	
	B30 Roofing						
3010	Roof Coverings	Built-up tar and gravel with flashing; perlite/EPS composite insulation		S.F. Roof	5.10	.34	0.3%
3020	Roof Openings	N/A		—	—	—	
C. INTERIORS							
1010	Partitions	Gypsum board and sound deadening board, steel studs	*9 S.F. Floor/L.F. Partition*	S.F. Partition	6.38	5.67	26.4%
1020	Interior Doors	Single leaf hollow metal	*90 S.F. Floor/Door*	Each	815	9.06	
1030	Fittings	N/A		—	—	—	
2010	Stair Construction	Concrete filled metal pan		Flight	11,550	2.34	
3010	Wall Finishes	20% paint, 75% vinyl cover, 5% ceramic tile		S.F. Surface	1.67	2.96	
3020	Floor Finishes	80% carpet tile, 10% vinyl composition tile, 10% ceramic tile		S.F. Floor	4.75	4.75	
3030	Ceiling Finishes	Gypsum board on resilient channel		S.F. Ceiling	3.54	3.54	
D. SERVICES							
	D10 Conveying						
1010	Elevators & Lifts	One geared freight, six geared passenger elevators		Each	303,750	4.05	3.8%
1020	Escalators & Moving Walks	N/A		—	—	—	
	D20 Plumbing						
2010	Plumbing Fixtures	Kitchen, toilet and service fixtures, supply and drainage	*1 Fixture/165 S.F. Floor*	Each	2302	13.95	16.9%
2020	Domestic Water Distribution	Electric water heater		S.F. Floor	4.07	4.07	
2040	Rain Water Drainage	Roof drains		S.F. Roof	1.50	.10	
	D30 HVAC						
3010	Energy Supply	Oil fired hot water, wall fin radiation		S.F.Floor	2	2	11.2%
3020	Heat Generating Systems	N/A		—	—	—	
3030	Cooling Generating Systems	Chilled water, fan coil units		S.F. Floor	10.01	10.01	
3050	Terminal & Package Units	N/A		—	—	—	
3090	Other HVAC Sys. & Equipment	N/A		—	—	—	
	D40 Fire Protection						
4010	Sprinklers	Sprinkler system, light hazard		S.F. Floor	2.89	2.89	3.0%
4020	Standpipes	Standpipes and hose systems		S.F. Floor	.31	.31	
	D50 Electrical						
5010	Electrical Service/Distribution	6000 ampere service, panel board and feeders		S.F. Floor	1.37	1.37	10.8%
5020	Lighting & Branch Wiring	Fluorescent fixtures, receptacles, switches, A.C. and misc. power		S.F. Floor	7.40	7.40	
5030	Communications & Security	Alarm systems, internet wiring, communications systems and emergency lighting		S.F. Floor	2.53	2.53	
5090	Other Electrical Systems	Emergency generator, 500 kW		S.F. Floor	.32	.32	
E. EQUIPMENT & FURNISHINGS							
1010	Commercial Equipment	N/A		—	—	—	0.0 %
1020	Institutional Equipment	N/A		—	—	—	
1030	Vehicular Equipment	N/A		—	—	—	
1090	Other Equipment	N/A		—	—	—	
F. SPECIAL CONSTRUCTION							
1020	Integrated Construction	N/A		—	—	—	0.0 %
1040	Special Facilities	N/A		—	—	—	
G. BUILDING SITEWORK		**N/A**					
					Sub-Total	107.47	**100%**
	CONTRACTOR FEES (General Requirements: 10%, Overhead: 5%, Profit: 10%)				25%	26.87	
	ARCHITECT FEES				6%	8.06	
					Total Building Cost	**142.40**	

07 21 Thermal Insulation

07 21 16 – Blanket Insulation

	07 21 16.20 Blanket Insulation for Walls	Crew	Daily Output	Labor-Hours	Unit	2008 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
0484	15" wide	1 Carp	1350	.006	S.F.	.57	.23		.80	.98
0486	23" wide		1600	.005		.57	.19		.76	.93
0488	9" thick, R-30, 11" wide		985	.008		.84	.31		1.15	1.40
0500	9" thick, R30, 15" wide		1150	.007		.84	.27		1.11	1.33
0550	23" wide		1350	.006		.84	.23		1.07	1.27
0560	12" thick, R-38, 11" wide		985	.008		.84	.31		1.15	1.40
0570	15" wide		1150	.007		.84	.27		1.11	1.33
0580	23" wide		1350	.006		.84	.23		1.07	1.27
0620	Unfaced fiberglass, 3-1/2" thick, R-13, 11" wide		1150	.007		.36	.27		.63	.81
0820	15" wide		1350	.006		.36	.23		.59	.75
0830	23" wide		1600	.005		.36	.19		.55	.70
0832	R15, 11" wide		1150	.007		.32	.27		.59	.76
0836	23" wide		1600	.005		.32	.19		.51	.65
0838	6" thick, R19, 11" wide		1150	.007		.58	.27		.85	1.05
0860	15" wide		1150	.007		.58	.27		.85	1.05
0880	23" wide		1350	.006		.58	.23		.81	.99
0882	R-21, 11" wide		1150	.007		.67	.27		.94	1.15
0886	15" wide		1350	.006		.67	.23		.90	1.09
0888	23" wide		1600	.005		.67	.19		.86	1.04
0890	9" thick, R30, 11" wide		985	.008		.84	.31		1.15	1.40
0900	15" wide		1150	.007		.84	.27		1.11	1.33
0920	23" wide		1350	.006		.84	.23		1.07	1.27
0930	12" thick, R38, 11" wide		985	.008		.90	.31		1.21	1.47
0940	15" wide		1000	.008		.90	.30		1.20	1.46
0960	23" wide		1150	.007		.90	.27		1.17	1.40
1300	Mineral fiber batts, kraft faced									
1320	3-1/2" thick, R12	1 Carp	1600	.005	S.F.	.38	.19		.57	.72
1340	6" thick, R19		1600	.005		.51	.19		.70	.86
1380	10" thick, R30		1350	.006		.75	.23		.98	1.18
1850	Friction fit wire insulation supports, 16" O.C.		960	.008	Ea.	.08	.32		.40	.58

07 21 23 – Loose-Fill Insulation

07 21 23.10 Poured Loose-Fill Insulation

0010	**POURED LOOSE-FILL INSULATION**									
0020	Cellulose fiber, R3.8 per inch	1 Carp	200	.040	C.F.	.64	1.52		2.16	3.07
0040	Ceramic type (perlite), R3.2 per inch		200	.040		1.72	1.52		3.24	4.26
0080	Fiberglass wool, R4 per inch		200	.040		.51	1.52		2.03	2.93
0100	Mineral wool, R3 per inch		200	.040		.39	1.52		1.91	2.80
0300	Polystyrene, R4 per inch		200	.040		3.09	1.52		4.61	5.75
0400	Vermiculite or perlite, R2.7 per inch		200	.040		1.72	1.52		3.24	4.26
0700	Wood fiber, R3.85 per inch		200	.040		.70	1.52		2.22	3.14

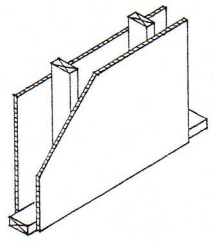
07 21 23.20 Masonry Loose-Fill Insulation

0010	**MASONRY LOOSE-FILL INSULATION**, vermiculite or perlite									
0100	In cores of concrete block, 4" thick wall, .115 CF/SF	D-1	4800	.003	S.F.	.20	.12		.32	.40
0200	6" thick wall, .175 CF/SF		3000	.005		.30	.19		.49	.61
0300	8" thick wall, .258 CF/SF		2400	.007		.44	.23		.67	.84
0400	10" thick wall, .340 CF/SF		1850	.009		.58	.30		.88	1.10
0500	12" thick wall, .422 CF/SF		1200	.013		.73	.47		1.20	1.51
0550	For sand fill, deduct from above					70%				
0600	Poured cavity wall, vermiculite or perlite, water repellant	D-1	250	.064	C.F.	1.72	2.23		3.95	5.30
0700	Foamed in place, urethane in 2-5/8" cavity	G-2A	1035	.023	S.F.	.41	.68	.58	1.67	2.21
0800	For each 1" added thickness, add	"	2372	.010	"	.12	.30	.25	.67	.90

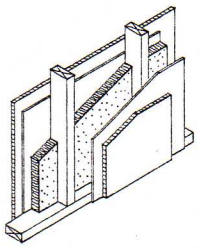
	09 91 23.72 Walls and Ceilings, Interior	Crew	Daily Output	Labor-Hours	Unit	2008 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
0400	Paint 1 coat, smooth finish, brushwork	1 Pord	1200	.007	S.F.	.06	.23		.29	.41
0440	Roller		1300	.006		.06	.21		.27	.38
0480	Spray		2275	.004		.05	.12		.17	.24
0500	Sand finish, brushwork		1050	.008		.06	.26		.32	.46
0540	Roller		1600	.005		.06	.17		.23	.32
0580	Spray		2100	.004		.05	.13		.18	.25
0800	Paint 2 coats, smooth finish, brushwork		680	.012		.12	.40		.52	.74
0840	Roller		800	.010		.13	.34		.47	.65
0880	Spray		1625	.005		.11	.17		.28	.37
0900	Sand finish, brushwork		605	.013		.12	.45		.57	.80
0940	Roller		1020	.008		.13	.26		.39	.54
0980	Spray		1700	.005		.11	.16		.27	.36
1200	Paint 3 coats, smooth finish, brushwork		510	.016		.18	.53		.71	1
1240	Roller		650	.012		.19	.42		.61	.83
1280	Spray		1625	.005		.16	.17		.33	.43
1300	Sand finish, brushwork		454	.018		.18	.59		.77	1.09
1340	Roller		680	.012		.19	.40		.59	.81
1380	Spray		1133	.007		.16	.24		.40	.54
1600	Glaze coating, 2 coats, spray, clear		1200	.007		.42	.23		.65	.80
1640	Multicolor		1200	.007		.87	.23		1.10	1.29
1700	For latex paint, deduct					10%				
1800	For ceiling installations, add						25%			
2000	Masonry or concrete block, oil base, primer or sealer coat									
2100	Smooth finish, brushwork	1 Pord	1224	.007	S.F.	.05	.22		.27	.39
2180	Spray		2400	.003		.08	.11		.19	.26
2200	Sand finish, brushwork		1089	.007		.09	.25		.34	.47
2280	Spray		2400	.003		.08	.11		.19	.26
2400	Paint 1 coat, smooth finish, brushwork		1100	.007		.09	.25		.34	.47
2480	Spray		2400	.003		.08	.11		.19	.26
2500	Sand finish, brushwork		979	.008		.09	.28		.37	.51
2580	Spray		2400	.003		.08	.11		.19	.26
2800	Paint 2 coats, smooth finish, brushwork		756	.011		.18	.36		.54	.73
2880	Spray		1360	.006		.16	.20		.36	.48
2900	Sand finish, brushwork		672	.012		.18	.40		.58	.79
2980	Spray		1360	.006		.16	.20		.36	.48
3200	Paint 3 coats, smooth finish, brushwork		560	.014		.26	.48		.74	1.01
3280	Spray		1088	.007		.24	.25		.49	.64
3300	Sand finish, brushwork		498	.016		.26	.54		.80	1.10
3380	Spray		1088	.007		.24	.25		.49	.64
3600	Glaze coating, 3 coats, spray, clear		900	.009		.60	.30		.90	1.11
3620	Multicolor		900	.009		1	.30		1.30	1.55
4000	Block filler, 1 coat, brushwork		425	.019		.12	.64		.76	1.08
4100	Silicone, water repellent, 2 coats, spray		2000	.004		.27	.14		.41	.49
4120	For latex paint, deduct					10%				
8200	For work 8 - 15' H, add						10%			
8300	For work over 15' H, add						20%			

	09 91 23.75 Dry Fall Painting									
0010	**DRY FALL PAINTING**	R099100-10								
0100	Walls									
0200	Wallboard and smooth plaster, one coat, brush	R099100-20	1 Pord	910	.009	S.F.	.04	.30	.34	.50
0210	Roll			1560	.005		.04	.17	.21	.31
0220	Spray			2600	.003		.04	.10	.14	.21

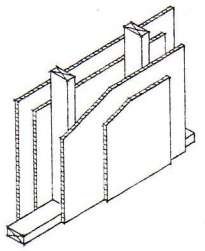
C1010 Partitions



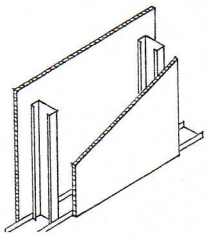
Gypsum board, single layer each side on wood studs.



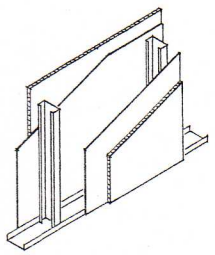
Gypsum board, sound deadening board each side, with 1-1/2" insulation on wood studs.



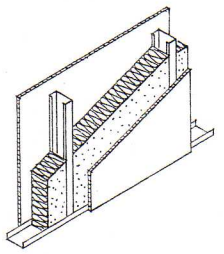
Gypsum board, two layers each side on wood studs.



Gypsum board, single layer each side on metal studs.



Gypsum board, sound deadening board each side on metal studs.

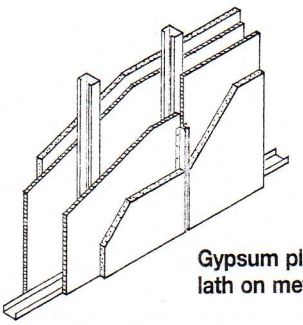


Gypsum board two layers one side, single layer opposite side, with 3-1/2" insulation on metal studs.

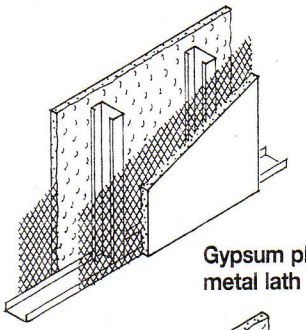
C1010 124 Drywall Partitions/Wood Stud Framing

	FACE LAYER	BASE LAYER	FRAMING	OPPOSITE FACE	INSULATION	COST PER S.F.		
						MAT.	INST.	TOTAL
1200	5/8" FR drywall	none	2 x 4, @ 16" O.C.	same	0	1.17	2.83	4
1250				5/8" reg. drywall	0	1.15	2.83	3.98
1300				nothing	0	.79	1.89	2.68
1400		1/4" SD gypsum	2 x 4 @ 16" O.C.	same	1-1/2" fiberglass	2.45	4.36	6.81
1450				5/8" FR drywall	1-1/2" fiberglass	2.16	3.83	5.99
1500				nothing	1-1/2" fiberglass	1.78	2.89	4.67
1600		resil. channels	2 x 4 @ 16", O.C.	same	1-1/2" fiberglass	2.18	5.55	7.73
1650				5/8" FR drywall	1-1/2" fiberglass	2.03	4.42	6.45
1700				nothing	1-1/2" fiberglass	1.65	3.48	5.13
1800		5/8" FR drywall	2 x 4 @ 24" O.C.	same	0	1.73	3.58	5.31
1850				5/8" FR drywall	0	1.40	3.11	4.51
1900				nothing	0	1.02	2.17	3.19
2200		5/8" FR drywall	2 rows-2 x 4 16"O.C.	same	2" fiberglass	2.99	5.20	8.19
2250				5/8" FR drywall	2" fiberglass	2.66	4.72	7.38
2300				nothing	2" fiberglass	2.28	3.78	6.06
2400	5/8" WR drywall	none	2 x 4, @ 16" O.C.	same	0	1.25	2.83	4.08
2450				5/8" FR drywall	0	1.21	2.83	4.04
2500				nothing	0	.83	1.89	2.72
2600		5/8" FR drywall	2 x 4, @ 24" O.C.	same	0	1.81	3.58	5.39
2650				5/8" FR drywall	0	1.44	3.11	4.55
2700				nothing	0	1.06	2.17	3.23
2800	5/8 VF drywall	none	2 x 4, @ 16" O.C.	same	0	2.13	3.05	5.18
2850				5/8" FR drywall	0	1.65	2.94	4.59
2900				nothing	0	1.27	2	3.27

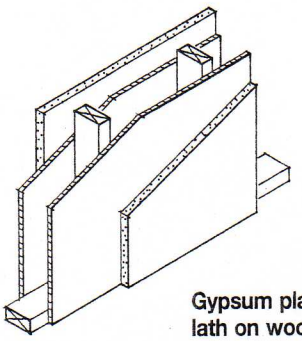
C1010 Partitions



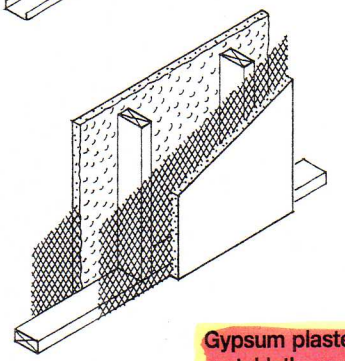
Gypsum plaster and gypsum lath on metal studs.



Gypsum plaster and diamond metal lath on metal studs.



Gypsum plaster and gypsum lath on wood studs.



Gypsum plaster and diamond metal lath on wood studs.

C1010 140 Plaster Partitions/Metal Stud Framing

	TYPE	FRAMING	LATH	OPPOSITE FACE		COST PER S.F. MAT.	INST.	TOTAL
1000	2 coat gypsum	2-1/2" @ 16"O.C.	3/8" gypsum	same		2.67	6.90	9.57
1010				nothing		1.56	4.01	5.57
1100		3-1/4" @ 24"O.C.	1/2" gypsum	same		2.77	6.70	9.47
1110				nothing		1.58	3.72	5.30
1500	2 coat vermiculite	2-1/2" @ 16"O.C.	3/8" gypsum	same		2.54	7.50	10.04
1510				nothing		1.49	4.33	5.82
1600		3-1/4" @ 24"O.C.	1/2" gypsum	same		2.64	7.30	9.94
1610				nothing		1.51	4.04	5.55
2000	3 coat gypsum	2-1/2" @ 16"O.C.	3/8" gypsum	same		2.56	7.90	10.46
2010				nothing		1.50	4.51	6.01
2020			3.4lb. diamond	same		2.29	7.90	10.19
2030				nothing		1.37	4.51	5.88
2040			2.75lb. ribbed	same		2.09	7.90	9.99
2050				nothing		1.27	4.51	5.78
2100		3-1/4" @ 24"O.C.	1/2" gypsum	same		2.66	7.65	10.31
2110				nothing		1.52	4.22	5.74
2120			3.4lb. ribbed	same		2.42	7.65	10.07
2130				nothing		1.41	4.22	5.63
3500	3 coat gypsum	2-1/2" @ 16"O.C.	3/8" gypsum	same		3.16	10.15	13.31
3510	W/med. Keenes			nothing		1.80	5.65	7.45
3520			3.4lb. diamond	same		2.89	10.15	13.04
3530				nothing		1.67	5.65	7.32
3540			2.75lb. ribbed	same		2.69	10.15	12.84
3550				nothing		1.57	5.65	7.22
3600		3-1/4" @ 24"O.C.	1/2" gypsum	same		3.26	9.90	13.16
3610				nothing		1.82	5.35	7.17
3620			3.4lb. ribbed	same		3.02	9.90	12.92
3630				nothing		1.71	5.35	7.06

C1010 Partitions

C1010 140 Plaster Partitions/Metal Stud Framing

	TYPE	FRAMING	LATH	OPPOSITE FACE		COST PER S.F. MAT.	INST.	TOTAL
4000	3 coat gypsum W/hard Keenes	2-1/2" @ 16"O.C.	3/8" gypsum	same		3.17	11.25	14.42
4010				nothing		1.80	6.15	7.95
4022		2-1/2" @ 16"O.C.	3.4 lb. diamond	same		2.90	11.25	14.15
4032				nothing		1.67	6.15	7.82
4040			2.75lb. ribbed	same		2.70	11.25	13.95
4050				nothing		1.57	6.15	7.72
4100		3-1/4" @ 24"O.C.	1/2" gypsum	same		3.27	11	14.27
4110				nothing		1.82	5.85	7.67
4120			3.4lb. ribbed	same		3.03	11	14.03
4130				nothing		1.71	5.85	7.56

C1010 142 Plaster Partitions/Wood Stud Framing

	TYPE	FRAMING	LATH	OPPOSITE FACE		COST PER S.F. MAT.	INST.	TOTAL
5000	2 coat gypsum	2"x4" @ 16"O.C.	3/8" gypsum	same		2.73	6.75	9.48
5010				nothing		1.62	3.92	5.54
5100		2"x4" @ 24"O.C.	1/2" gypsum	same		2.79	6.65	9.44
5110				nothing		1.60	3.76	5.36
5500	2 coat vermiculite	2"x4" @ 16"O.C.	3/8" gypsum	same		2.60	7.35	9.95
5510				nothing		1.55	4.24	5.79
5600		2"x4" @ 24"O.C.	1/2" gypsum	same		2.66	7.25	9.91
5610				nothing		1.53	4.08	5.61
6000	3 coat gypsum	2"x4" @ 16"O.C.	3/8" gypsum	same		2.62	7.75	10.37
6010				nothing		1.56	4.42	5.98
6020			3.4lb. diamond	same		2.35	7.80	10.15
6030				nothing		1.43	4.45	5.88
6040			2.75lb. ribbed	same		2.12	7.85	9.97
6050				nothing		1.32	4.47	5.79
6100		2"x4" @ 24"O.C.	1/2" gypsum	same		2.68	7.60	10.28
6110				nothing		1.54	4.26	5.80
6120			3.4lb. ribbed	same		2.05	7.70	9.75
6130				nothing		1.23	4.30	5.53
7500	3 coat gypsum W/med Keenes	2"x4" @ 16"O.C.	3/8" gypsum	same		3.22	10	13.22
7510				nothing		1.86	5.55	7.41
7520			3.4lb. diamond	same		2.95	10.05	13
7530				nothing		1.73	5.55	7.28
7540			2.75lb. ribbed	same		2.72	10.10	12.82
7550				nothing		1.62	5.60	7.22
7600		2"x4" @ 24"O.C.	1/2" gypsum	same		3.28	9.85	13.13
7610				nothing		1.84	5.40	7.24
7620			3.4lb. ribbed	same		3.04	10.05	13.09
7630				nothing		1.73	5.45	7.18
8000	3 coat gypsum W/hard Keenes	2"x4" @ 16"O.C.	3/8" gypsum	same		3.23	11.05	14.28
8010				nothing		1.86	6.05	7.91
8020			3.4lb. diamond	same		2.96	11.15	14.11
8030				nothing		1.73	6.10	7.83
8040			2.75lb. ribbed	same		2.73	11.15	13.88
8050				nothing		1.62	6.10	7.72
8100		2"x4" @ 24"O.C.	1/2" gypsum	same		3.29	10.95	14.24
8110				nothing		1.84	5.90	7.74
8120			3.4lb. ribbed	same		3.05	11.10	14.15
8130				nothing		1.73	6	7.73