

Marshall Valuation Service Analysis
A.L.S. HEALTHCARE CONSULTANT SERVICES
PRINCE GEORGE'S REGIONAL MEDICAL CENTER
Hospital

I. The Marshall and Swift Guideline

		M&S Page #	
a	Type	Hospital	Gen. Hospital or Conval. Hosp.
b	Construction Quality/Class	Good/A	
c	Stories	10	
d	Perimeter	1,613	for use in Perimtr Adj.
e	Average Floor to Floor Height	17.0	
f	Square Feet	667,411	
f.1	Average floor Area	66,741	for use in Perimtr Adj.
A. Base Costs			
g	Basic Structure	\$336.71	Section 15-24 - 26
h	Elimination of HVAC cost for adjustment	0	Section 15-25
i	HVAC Add-on for Mild Climate	0	Section 15-25
j	HVAC Add-on for Extreme Climate	0	Section 15-25
k	Total Base Cost	\$336.71	Section 15-25
Adjustment for Departmental Differential Cost Factors			
		1.06	
	Adjusted Total Base Cost	\$356.67	
B. Additions			
l	Elevator (If not in base)	\$0.00	Section 15-36
m	Other	\$0.00	Section 15-25
n	Subtotal	\$0.00	
o	Total	\$356.67	
C. Multipliers			
p	Perimeter Multiplier	0.909804254	15-37 Interpolated
q	Product	\$324.50	
r	Height Multiplier	1.12	15-37
s	Product	\$362.18	
t	Multi-story Multiplier	1.035	15-25
u	Product	\$374.86	
D. Sprinklers			
v	Sprinkler Amount	\$2.03	15-36
w	Subtotal	\$376.89	
E. Update/Location Multipliers			
x	Update Multiplier	1.06 8/13	99-3
y	Product	\$399.50	
z	Location Multiplier	1.07 7/13	99-5
aa	Product	\$427.47	
bb	Calculated Square Foot Cost Standard	\$427.47	

Marshall Valuation Service Analysis
A.L.S. HEALTHCARE CONSULTANT SERVICES
PRINCE GEORGE'S REGIONAL MEDICAL CENTER
Penthouse

I. The Marshall and Swift Guideline

M&S Page #

a	Type	Mechanical Penthouse		
b	Construction Quality/Class	Good/A		
c	Stories	7		for use in Perimtr Adj.
d	Perimeter	250		
e	Average Floor to Floor Height	20.00		
f	Square Feet	4,288		for use in Perimtr Adj.
	Average floor Area	4,288		
	A. Base Costs			Section 15-19
g	Basic Structure	\$ 82.55		Section 15-25
h	Elimination of HVAC cost for adjustment	0		Section 15-25
i	HVAC Add-on for Mild Climate	0		Section 15-25
j	HVAC Add-on for Extreme Climate	0		Section 15-25
k	Total Base Cost	\$82.55		
	B. Additions			Section 15-36
l	Elevator (If not in base)	\$0.00		Section 15-25
m	Other	\$0.00		
n	Subtotal	\$0.00		
o	Total	\$82.55		
	C. Multipliers			15-37
p	Perimeter Multiplier	0.997784		Interpolate
q	Product	\$ 82.37		15-37
r	Height Multiplier	1.069		15-25
s	Product	\$88.05		
t	Multi-story Multiplier	1.035		
u	Product	\$91.13		
	D. Sprinklers			15-36
v	Sprinkler Amount	\$1.53		
w	Subtotal	\$92.66		
	E. Update/Location Multipliers			99-3
x	Update Multiplier	1.06 8/13		
y	Product	\$98.22		99-5
z	Location Multiplier	1.07 7/13		
aa	Product	\$105.10		
bb	Calculated Square Foot Cost Standard	\$105.10		

Marshall Valuation Service Analysis
A.L.S. HEALTHCARE CONSULTANT SERVICES
SHORE REGIONAL MEDICAL CENTER
PRINCE GEORGE'S REGIONAL MEDICAL CENTER

	MVS Benchmark	Sq. Ft.	Total Cost Based on MVS
Standard			
<u>"Tower" Component</u>	\$427.47	667,411	\$ 285,297,236.48
<u>Mechanical Penthouse</u>	\$105.10	4,288	\$ 450,657.75
<u>Consolidated</u>	\$ 425.41	671,699	\$ 285,747,894.23

Marshall Valuation Service Analysis
A.L.S. HEALTHCARE CONSULTANT SERVICES
PRINCE GEORGE'S REGIONAL MEDICAL CENTER
Clinical Building Component

II. The Project

A. Base Calculations	Actual	Per Sq. Foot
Building	\$257,572,688	\$383.46
Fixed Equipment	In Building	\$0.00
Site Preparation	\$23,904,693	\$35.59
Architectural Fees	\$17,350,181	\$25.83
Permits	\$5,397,834	\$8.04
Capitalized Construction Interest	Calculated Below	Calculated Below
Subtotal	\$304,225,396	\$452.92

B. Extraordinary Cost Adjustments

Project Costs

Canopy	\$3,500,000	Building
Foundation Drainage/Dewatering	\$300,000	Building
LEED Silver Premium	\$10,302,908	Building
Redundant Electric Service	\$2,500,000	Building
Redundant Water Service	\$300,000	Building
Jurisdictional Hook-up Fees	\$500,000	Permits
Premium for Concrete Frame Construction	\$1,750,000	Building
Demolition	\$1,000,000	Site
Storm Drains	\$1,500,000	Site
Rough Grading	\$3,500,000	Site
Landscaping	\$900,000	Site
Sediment Control & Stabilization	\$100,000	Site
Roads	\$500,000	Site
Helipad	\$1,500,000	Building
Deep Foundations	\$500,000	Site
Utilities	\$5,600,000	Site
Signs	\$500,000	Building
Pilings	\$500,000	Site
Hillside Foundation	\$1,500,000	Site
Premium for Paying Prevailing Wage	\$16,584,385	Building
Premium for Paying Prevailing Wage	\$581,329	Site
Total Cost Adjustments	\$53,918,621	18.8%

C. Adjusted Project Cost

Per Square Foot

Building	\$220,335,396	\$328.03
Fixed Equipment		\$0.00
Site Preparation	\$7,723,365	\$11.50
Architectural Fees	\$14,089,188	\$20.98
Permits	\$4,897,834	\$7.29
Subtotal	\$247,045,783	\$367.79
Capitalized Construction Interest	\$34,904,545	\$51.96
Total	\$281,950,328	\$419.76

MVS Benchmark	\$425.41	
The Project	\$419.76	
Difference	-\$5.65	-\$3,797,566
	-1.33%	

Departmental Cost Differential Analysis

Department/Function	BGSF	MVS Department Name	MVS Differential Cost Factor	Cost Factor X SF
ACUTE PATIENT CARE				
ACUTE CARE	95,312	Inpatient Unit	1.06	101,031
INTENSIVE CARE	22,288	Inpatient Unit	1.06	23,625
POST-PARTUM	17,584	Inpatient Unit	1.06	18,639
NEONATAL INTENSIVE CARE UNIT	16,912	Inpatient Unit	1.06	17,927
MT. WASHINGTON PEDIATRICS	12,096	Inpatient Unit	1.06	12,822
DIAGNOSTICS & TREATMENT				
SURGERY	36,000	Operating Suite, Total	1.59	57,240
CARDIAC CATH LAB	11,760	Operating Suite, Total	1.59	18,698
GI - ENDOSCOPY	2,280	Operating Suite, Total	1.59	3,625
ADULT/PEDS ED	30,000	Emergency Suite	1.18	35,400
TRAUMA	8,280	Emergency Suite	1.18	9,770
UNIVERSAL CARE / OBSERVATION	29,640	Inpatient Unit	1.06	31,418
IMAGING	22,440	Radiology	1.22	27,377
NON-INVASIVE CARDIOLOGY	3,480	Offices	0.96	3,341
NEURODIAGNOSTICS	1,200	Laboratories	1.15	1,380
LABOR & DELIVERY	10,680	Obstetrical Suite Only	1.44	15,379
C-SECTION	3,120	Operating Suite, Total	1.59	4,961
DIALYSIS	2,040	Laboratories	1.15	2,346
PT/OT	2,880	Physical Medicine	1.09	3,139
CLINICAL SUPPORT				
LABORATORY / PATHOLOGY	9,870	Laboratories	1.15	11,351
PHARMACY	3,675	Pharmacy	1.33	4,888
OTHER CLINICAL SUPPORT	6,510	Offices	0.96	6,250
NON CLINICAL SUPPORT				
DIETARY / DINING	17,040	Dietary	1.52	25,901
MATERIALS / BIO MED / EVS	11,280	Storage and Refrigeration	1.6	18,048
CENTRAL STERILE	7,680	Central Sterile Supply	1.54	11,827
FACILITIES & SUPPORT SERVICES	17,040	Offices	0.96	16,358
IT / TELECOM	2,880	Offices	0.96	2,765
OFFICES & EDUCATION				
OFFICE / ADMINISTRATION	9,870	Offices	0.96	9,475
ON CALL	6,500	Offices	0.96	6,240

Departmental Cost Differential Analysis

Department/Function	BGSF	MVS Department Name	MVS Differential Cost Factor	Cost Factor X SF
CONFERENCE CENTER	4,935	Public Space	0.8	3,948
SUPPORT/OTHER/PUBLIC	68,459	Public Space	0.8	54,767
MECHANICAL/ELECTRICAL	89,000	Mechanical Equipment and Shops	0.7	62,300
BEHAVIORAL HEALTH CLINICAL PROGRAMS				
ACUTE BEHAVIORAL HEALTH	23,072	Inpatient Unit	1.06	24,456
PARTIALIZATION / OUTPATIENT	3,584	Outpatient Department	0.99	3,548
ASSESSMENT STABILIZATION	2,800	Inpatient Unit	1.06	2,968
AMBULATORY/CANCER CLINICAL PROGRAMS				
CANCER INFUSION	6,300	Laboratories	1.15	7,245
RADIATION ONCOLOGY	13,520	Radiology	1.22	16,494
OTHER OP CLINIC	13,200	Outpatient Department	0.99	13,068
SUPPORT/OTHER/PUBLIC	14,204	Public Space	0.8	11,363
MECHANICAL	8,000	Mechanical Equipment and Shops	0.7	5,600
TOTAL	667,411		1.059286	706,979

Marshall Valuation Service Analysis
A.L.S. HEALTHCARE CONSULTANT SERVICES
PRINCE GEORGE'S REGIONAL MEDICAL CENTER
Central Utility Plant

I. The Marshall and Swift Guideline

M&S Page #

a	Type	Hospital	Gen. Hospital or Conval. Hosp.
b	Construction Quality/Class	Good/A	
c	Stories	1	
d	Perimeter	622	for use in Perimtr Adj.
e	Average Floor to Floor Height	41.0	
f	Square Feet	40,000	
f.1	Average floor Area	40,000	for use in Perimtr Adj.

A. Base Costs

g	Basic Structure	\$336.71	Section 15-24 - 26
h	Elimination of HVAC cost for adjustment	0	Section 15-25
i	HVAC Add-on for Mild Climate	0	Section 15-25
j	HVAC Add-on for Extreme Climate	0	Section 15-25
k	Total Base Cost	\$336.71	Section 15-25

**Adjustment for Departmental
Differential Cost Factors**

0.70

Adjusted Total Base Cost

\$235.70

B. Additions

l	Elevator (If not in base)	\$0.00	Section 15-36
m	Other	\$0.00	Section 15-25
n	Subtotal	\$0.00	

Total

\$235.70

C. Multipliers

p	Perimeter Multiplier	0.884786667	15-37	Interpolate
q	Product	\$208.54		
r	Height Multiplier	1.69	15-37	
s	Product	\$352.59		
t	Multi-story Multiplier	1.000	15-25	
u	Product	\$352.59		

D. Sprinklers

v	Sprinkler Amount	\$3.14	15-36
w	Subtotal	\$355.73	

E. Update/Location Multipliers

x	Update Multiplier	1.06 8/13	99-3
y	Product	\$377.08	
z	Location Multiplier	1.07 7/13	99-5
aa	Product	\$403.47	

Calculated Square Foot Cost Standard

\$403.47

II. The Project

A. Base Calculations

Building

Actual

\$9,646,917

Per Sq. Foot

\$241.17

Fixed Equipment		\$0.00
Site Preparation	\$895,307	\$22.38
Architectual Fees	\$649,819	\$16.25
Permits	\$202,166	\$5.05
Subtotal	\$11,394,210	\$284.86

B. Extraordinary Cost Adjustments

Premium for Paying Prevailing Wage
Premium for Paying Prevailing Wage

Project Costs

\$675,284 Building
\$62,671 Site

C. Adjusted Project Cost

	Per Square Foot	
Building	\$8,971,633	\$224.29
Fixed Equipment		\$0.00
Site Preparation	\$832,635	\$20.82
Architectual Fees	\$649,819	\$16.25
Permits	\$202,166	\$5.05
Subtotal	\$10,656,254	\$266.41

Capitalized Construction Interest	\$2,832,290	\$70.81
Total	\$14,226,500	\$355.66

MVS Benchmark	\$403.47
The Project	\$355.66
Difference	-\$47.81
	-11.85%

M&S Method for Interpolating Area and Perimeter Factor

Tower - New Construction

		Perimeter						
			1,600	1,613	1,800	1600	1612.8	1800
Area	50,000		0.928		0.938	0.928		0.938
	66,741					0.909249968	0.90980425	0.91791068
	75,000		0.9		0.908	0.9		0.908
Area Interpolation								
1	0.928	-		0.9	=		0.028	
2	66741.1	-		50000	=		16741.1	
3	75000	-		50000	=		25000	
4	16741.1	/		25000	=		0.669644	
5	0.028	*		0.669644	=		0.018750032	
6	0.928	-		0.018750032	=		0.909249968	
7	0.938	-		0.908	=		0.03	
8	0.03	*		0.669644	=		0.02008932	
9	0.938	-		0.02008932	=		0.91791068	
Perimeter Interpolation								
10	1800	-		1600	=		200	
11	1612.8	-		1600	=		12.8	
12	12.8	/		200	=		0.064	
13	0.91791068	-		0.909249968	=		0.008660712	
14	0.008660712	*		0.064	=		0.000554286	
15	0.909249968	+		0.000554286	=		0.909804254	

New

Total Square Footage	667,411
C Level	124,860
1st Floor	172,803
2nd Floor	95,755
3rd Floor	84,412
4th Floor	31,586
5th Floor	31,599
6th Floor	31,599
7th Floor	31,599
8th Floor	31,599
9th Floor	31,599
Penthouse	
Average	66741
Perimeter	
C Level	2342
1st Floor	2,519
2nd Floor	2,683
3rd Floor	2,477
4th Floor	1017
5th Floor	1018

Hospital CUP

Cap Interest	\$46,486,670	\$4,013,330	\$50,500,000
Interest Income	\$13,899,974	\$1,200,026	\$15,100,000
Net Cap Interest	\$32,586,695	\$2,813,305	\$35,400,000

Capitalized Construction Interest and Financing Fee Allocation

	New	Renovation	Total			
Building Cost	\$220,335,396		\$0			
Subtotal Cost (w/o Cap Interest)	\$247,045,783		\$0	\$247,045,783		
Subtotal/Total	100.0%	0.0%				
Total Project Cap Interest [(Subtotal Cost/	\$39,135,885		\$0	\$39,135,885	\$32,586,695	\$6,549,190
Building/Subtotal	89.2%	#DIV/0!				
Building Cap Interest	\$34,904,545	#DIV/0!				

Loan Placement Fees

	Hospital	Cup				
	\$6,549,190	\$550,810			\$4,013,330	
	New	Renovation	Total			
Building Cost	\$8,971,633		\$0			
Subtotal Cost (w/o Cap Interest)	\$10,656,254		\$0	\$10,656,254		

6th Floor	1018
7th Floor	1018
8th Floor	1018
9th Floor	1018
Penthouse	
Average	1613
Wall Height (floor to eaves)	
C Level	18.00
1st Floor	18.00
2nd Floor	14.00
3rd Floor	24.00
4th Floor	14.00
5th Floor	14.00
6th Floor	14.00
7th Floor	14.00
8th Floor	14.00
9th Floor	14.00
Penthouse	
Average	17.05

Height X sf

2,247,480
3,110,454
1,340,570
2,025,888
442,204
442,386
442,386
442,386
442,386
442,386

11,378,526 **17.04875407** Height

Subtotal/Total	100.0%	0.0%					
Total Project Cap Interest [(Subtotal Cost/7	\$3,364,115	\$0	\$3,364,115	\$2,813,305	\$550,810		
Building/Subtotal	84.2%	#DIV/0!					
Building Cap Interest	\$2,832,290	#DIV/0!					
Wall Height Interpolation	16	1.092					
	17.05						
	18	1.138					
	1	1.092	-	1.138	=	-0.046	
	2	17	-	16	=	1.048754	
	3	18	-	16	=	2	
	4	1.048754066	/	2	=	0.524377	
	5	-0.046	*	0.524377033	=	-0.02412	
	6	1.092	-	-0.024121344	=	1.11612	

M&S Method for Interpolating Area and Perimeter Factor

Penthouse

Area	Perimeter					
	200	250	250	200	250	250
	4000	0.975		0.975		1.007
	4288		1.007	0.967512	0.997784	0.997784
	5000	0.949		0.949		0.975

Area Interpolation

1	0.975 -	0.949 =	0.026
2	4288 -	4000 =	288
3	5000 -	4000 =	1000
4	288 /	1000 =	0.288
5	0.026 *	0.288 =	0.007488
6	0.975 -	0.007488 =	0.967512
7	1.007 -	0.975 =	0.032
8	0.032 *	0.288 =	0.009216
9	1.007 -	0.009216 =	0.997784

Perimeter Interpolation

10	250 -	200 =	50
11	250 -	200 =	50
12	50 /	50 =	1
13	0.997784 -	0.967512 =	0.030272
14	0.030272 *	1 =	0.030272
15	0.967512 +	0.030272 =	0.997784

	New							
	8576	17152	34304	68608				
	500	1000	2000	4000				
	Total Squar	4288			Wall Height Interpolation			
Penthouse	4288				20	1.184		
Average	4288				20	1.184		
Perimeter					20	1.184	62.5	3906.25
Penthouse	250							
Average	250							
Wall Height (floor to e	Wall Height Interpolat				1	1.184 -	1.184 =	0
Penthouse	20	85760			2	20 -	20 =	0
Average	20	85760	20		3	20 -	20 =	0
					4	0 /	0 =	#DIV/0!
					5	0 *	#DIV/0! =	#DIV/0!
					6	1.184 -	#DIV/0! =	1.184

M&S Method for Interpolating Area and Perimeter Factor

CUP

Area	Perimeter					
	600	622	700	600	622	700
	35000	0.89	0.897	0.89		0.897
	40000			0.882	0.884787	0.894667
	50000	0.866	0.89	0.866		0.89

Area Interpolation

1	0.89 -	0.866 =	0.024
2	40000 -	35000 =	5000
3	50000 -	35000 =	15000
4	5000 /	15000 =	0.333333
5	0.024 *	0.333333 =	0.008
6	0.89 -	0.008 =	0.882
7	0.897 -	0.89 =	0.007
8	0.007 *	0.333333 =	0.002333
9	0.897 -	0.002333 =	0.894667

Sprinkler Interpolation

30000	3.28
40000	3.14
50000	3

0 0

Perimeter Interpolation

10	700 -	600 =	100	1	3.28 -	3 =	0.28
11	622 -	600 =	22	2	40000 -	30000 =	10000
12	22 /	100 =	0.22	3	50000 -	30000 =	20000
13	0.894667 -	0.882 =	0.012667	4	10000 /	20000 =	0.5
14	0.012667 *	0.22 =	0.002787	5	0.28 *	0.5 =	0.14
15	0.882 +	0.002787 =	0.884787	6	3.28 -	0.14 =	3.14

	New	80000	160000	320000	640000			
		1244	2488	4976	9952			
Total Squa	40000	Wall Height Interpolation						
1	40000				32	1.459		
Average	40000				41	1.69075		
Perimeter					36	1.562	155.5	24180.25
1	622							
Average	622							
Wall Height (floor to e	Wall Height Interpolat			1	1.459 -	1.562 =	-0.103	
Penthouse	41			2	41 -	32 =	9	
Average	41	0		3	36 -	32 =	4	
				4	9 /	4 =	2.25	
				5	-0.103 *	2.25 =	-0.23175	
				6	1.459 -	-0.23175 =	1.69075	