

6

Walls finish.

Fairfaced concrete.

3703 m²

A102

3558.76

B01 → B21

1.0

B21

7.07
4.5

3526.95 * 1.05 =

3703.3

The National
Museum.

Basement Floor

23/02/00

national museum
walls of ~~basement~~ floors Drawing No. A102

Dig no.	Notes	Factor	Length m	Width m	Area m2	Total	Height m	Total m3
02/001L			151.09			151.09	4.50	679.91
02/002L			9.72			9.72	4.50	43.74
02/003L			66.42			66.42	4.50	298.89
02/004L			26.58			26.58	4.50	119.61
02/005L			19.34			19.34	4.50	87.03
02/006L			18.99			18.99	4.50	85.46
02/007L			27.66			27.66	4.50	124.47
02/008L			48.74			48.74	4.50	219.33
02/009L			47.58			47.58	4.50	214.11
02/010L			123.14			123.14	4.50	554.13
02/011L			64.55			64.55	4.50	290.48
02/012L			19.43	37.75		19.43	2.8	54.4
02/013L			18.32	11.05		18.32	2.8	51.29
02/014L			18.78			18.78	4.50	84.51
02/015L			49.35			49.35	4.50	222.08
02/016L			30.27			30.27	4.50	136.22
02/017L			16.16			16.16	4.50	72.72
02/018L			19.55			19.55	4.50	87.98
02/019L			15.22			15.22	4.50	68.49
02/020L			7.13			7.13	4.50	32.09
02/021L			7.07			7.07	4.50	31.82
02/							94.50	3558.76
						805.09		3622.95

767.34
1.05
806

Finish
↑

*105 = 3736.6

10/11

Ceiling finish.
Fair faced concrete

The National
Museum.

		2874 m ²
		2848.0
7.0		G-04
<u>1.0</u>		
44		G-06
<u>1.0</u>		
36		G-13
<u>1.0</u>		
15		G-14
<u>1.0</u>		
11		G-15
<u>1.0</u>		

113

Collection
 113
 2589.45
 10

 2712.45
 1.05

 2848.07

Ceiling finish.

Fairfaced concrete.

B21
17.84
1.0

2607.29
1.0

B01 - B11

B11 - B20

2589.45

m²

The National
Museum.

Ceiling finish.

fairfaced concrete.

m²

10.0
1.0

S-03

10-

The National
museum.

Mild steel of characteristic
strength $f_y = 280 \text{ MPa}$

Reinforcement steel bars

79,565.- kg

5% of H_{gh}

1446,643.-
0.05

72332 x 1.10 = 79,565.- ✓

Wire mesh, 5 mm diameter
at 100 mm each way

2942 M2

2942 -
1 -
—

Main Building

2942 J

Expansion joint filler

Expansion joint compressible
filler, ~~50 mm thick~~ including
mastic sealant, 50 mm-thick

12 M2

5cm compaction
filler.

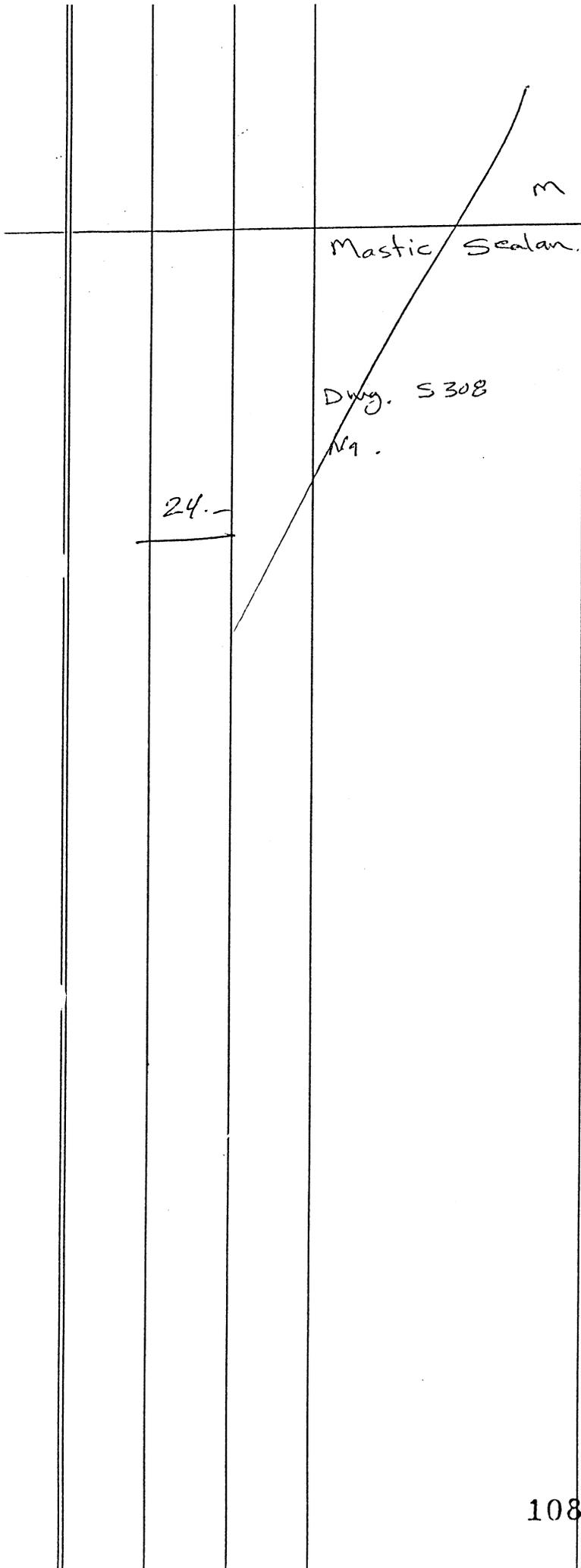
Dwg. 5308.
N9

24.
0.475

11.40 x 1.05 = 12.-

The National Mus.
Structural Works

Service Annex



The National Mus.
Structural works

Service Annex.

Concrete C15, ch. strength 15 MPa

Blinding, 50 mm thick

325-

m³

Blinding 5 cm thick
strip footings

Service Annex

1.45
18.80
0.05

TA1

1.15
18.70
0.05

TA2

1.05
162.40
0.05

TA3

10.965

1.05
164.50
0.05

TA3

0.80
121.00
0.05

T4

0.55
44.40
0.05

T5

0.20
27.60
0.05

T6

0.60
55.00
0.05

T7

0.65
6.80
0.05

T8

0.45
5.50
0.05

T9

0.65
70.20
0.05

T10

0.65
3.00
0.05

T11

0.35
6.00
0.05

19.452

109

The National Museum

Foundations

main Building

collection

10.965

19.452

5.79

25.64

11.33

12.54

63.81

5659.53

3091.0572

1.05

= 324.51

The National museum

Foundations

Blinding 5 cm thick under
S.O.G.

m³

Service Annex
20 cm thick
slab.

1276.22
0.05

63.81

986.67
0.05

2203.86
0.05

159.53

Main Bldg.

20 cm thick slab.

30 cm thick slab.

The National museum

Foundations

22

m³

Blinding 5 cm thick
isolated footings
cont'd.

main Bldg

5.70
5.70
0.05

F16

5.10
5.10
0.05

F17

2/2.90
2.90
0.05

F18

6.20
6.20
0.05

F19

7.60
4.50
0.05

F20

2/2.60
2.60
0.05

F21

8.00
4.90
0.05

F22

2/3.60
3.60
0.05

F23

11.33

3/2.70
2.70
0.05

F24

4.00
4.00
0.05

F25

5.10
5.10
0.05

F26

2/4.40
4.40
0.05

F27

4.70
4.70
0.05

F28

2/13.40
4.70
0.05

F29

12.54

111

3. ch

lab

The National museum

Foundations

Blinding 5 cm thick under
S.O.G. ^{m³}

Service Annex
20 cm thick
slab.

1276.22
0.05

986.67
0.05

Main Bldg.
20 cm thick slab.

2203.86
0.05

30 cm thick slab.

63.81

159.53

Blinding, 100 mm thick

228 - m³

Blinding 10 cm thick under strip footings

1.45
18.80
0.10

1.15
18.70
0.10

1.05
162.40
0.10

21.93

Service Annex

TA1

TA2

TA3

Collection

21.93

11.57

33.50 x 1.05
= 35.20

The National Museum

Foundations

main Building

TA3

1.05
164.50
0.10

T4

2.30
121.00
0.10

T5

1.80
44.40
0.10

T6

1.10
27.60
0.10

T7

1.90
55.00
0.10

T8

2.00
6.80
0.10

Collection

84.06

51.27

22.66

25.07

T9

1.60
51.50
0.10

T10

1.90
70.20
0.10

183.06 x 1.05
= 192.2

3.55
3.00
0.10

T11

1.40
6.00
0.10

84.06

The National Museum

Foundations

Main Building

F5

F6

F7

F8

F9

F10

F11

F12

F13

F14

F15

m³

Blinding 10 cm thick under
isolated footings

service Annex.

FA1

FA2

F3

F4

24/1.20
1.20
0.10

3/2.10
2.10
0.10

3/2.50
2.50
0.10

17/1.70
1.70
0.10

11.57

5.55
5.55
0.10

10/3.00
3.00
0.10

2/5.90
5.90
0.10

2/5.70
5.70
0.10

2/5.60
5.60
0.10

2/3.40
3.40
0.10

2/5.50
5.50
0.10

2/6.00
6.00
0.10

4.60
4.60
0.10

2.50
2.50
0.10

3.40
3.40
0.10

114

51.27

Foundations

		m ³	
Blinding 10 cm thick under isolated footings		cont'd.	
		<u>main Bldg</u>	
5.70	F16	3/2.70	F24
5.70		2.70	
0.10		0.10	
		4.00	F25
		4.00	
		0.10	
5.10	F17	5.10	F26
5.10		5.10	
0.10		0.10	
2/2.90	F18	2/4.40	F27
2.90		4.40	
0.10		0.10	
6.20	F19	4.70	F28
6.20		4.70	
0.10		0.10	
7.60	F20	2/13.40	F29
4.50		4.70	
0.10		0.10	
2/2.60	F21		
2.60			
0.10			
8.00	F22		
4.90			
0.10			
2/3.60	F23		
3.60			
0.10			
22.66		25.07	

Concrete C25, Ch. strength 25 MPa

Column bases

884 m³

Main Bldg. | Service Annex

851.- | 33.-

m³

The National Museum

Foundations

R.C. for isolated footings

24/ 1.00
1.00
0.30

3/ 1.90
1.90
0.40

3/ 2.30
2.30
0.50

17/ 1.50
1.50
0.30

5.35
5.35
1.00

10/ 2.80
2.80
0.50

2/ 5.70
5.70
1.10

2/ 5.50
5.50
1.00

2/ 5.40
5.40
1.00

Service Annex

F A1

F A2

F 3

F 4

F 5 -

F 6 -

F 7 -

F 8 -

F 9 -

Main Bldg

Collection

258.12

264.3

162.487

125.145

810.052

1.05

= 850.55

30.94 x 1.05 = 32.487

2/ 3.20
3.20
0.60

2/ 5.30
5.30
1.00

2/ 5.80
5.80
1.10

4.40
4.40
0.80

2.30
2.30
0.50

3.20
3.20
0.60

5.50
5.50
1.00

4.90
4.90
1.00

2/ 2.70
2.70
0.50

6.00
6.00
1.00

F10 -

F11 -

F12 -

F13 -

F14 -

F15 -

F16 -

F17 -

F18 -

F19 -

258.12

116

264.30

The National Museum
Foundations
main Bldg.

m³

R.C for isolated footings
 conf'd

	7.40
	4.30
	0.90
2/	2.40
	2.40
	0.50
	7.80
	4.70
	1.00
2/	3.40
	3.40
	0.70
3/	2.50
	2.50
	0.50
	3.80
	3.80
	0.70
	4.90
	4.90
	1.00
2/	4.20
	4.20
	0.90

F20 -
 F21 -
 F22 -
 F23 -
 F24 -
 F25 -
 F26 -
 F27 -

4.50
4.50
0.90
2/13.20
4.50
0.90

F28 -
 F29 -

125.145

162.487

Strip Foundations

605 m³

Main Bldg. Service Annex

548.- 57.- m³

The National museum

Foundations

R.C. for strip footings

Service Annex

Main Bldg

TA1

1.25
18.80
0.30

2.10
121.00
0.80

T4

TA2

0.95
18.70
0.30

1.60
44.40
0.80

T5

TA3

0.85
162.40
0.30

0.90
27.60
0.80

T6

53.79 x 1.05 = 56.50
main Bldg.

0.85
164.5
0.30

1.70
55.00
0.80

T7

collection

41.95
480.01

521.96 x 1.05

= 548.06

41.95

1.80
6.80
0.80

T8

1.40
5.50
0.80

T9

1.70
70.20
0.80

T10

3.35
3.00
0.80

T11

1.20
6.00
0.80

100 mm thick S.O.G
311 M³

The National Museum
Foundations

10cm thick R.C. slab. m³

Main Building

2203.86
0.10

2942.- M²
x
0.10

294.-
x
1.05

311.-

~~2203.86 x 1.05 = 231~~

LARA

2203.86 x 1.05 = 2314.-

?!.

please clarify ✓

20 mm thick, Slab on grade

475 —
m³

R.C for S.O.G. 20 cm thick

main Bldg

986.67
0.20

197.33

197.33
255.24

452.57 x 1.05
= 475.2

1276.22
0.20

255.24

The National museum

Service Annex.

300mm thick, slab on grade

694. - m³

R.C. Joists 0.6-30cm thick

2994.20
0.30

790.342
0.30

Area of footings

$$661.158 \times 1.05 = 694.22$$

Walls, Various thickness

2877
~~2182~~ m³

R.C for walls.

0.20
68.95
4.30

20 cm thick

59.30

0.25
10.00
4.30

25 cm thick

10.75

0.30
279.50
4.30

30 cm thick

360.56

430.61

The National Museum.

Ground Floor

2182.-
295.-
292.-
108.-

2877

Collection

430.61
568.39
440.42
122.36
516.19

2077.97 x 1.05

= 2181.87

The National Museum

Ground Floor

123

R.C for walls.

Main Building

0.25	
96.50	83.23
3.45	
0.25	
2.80	4.83
3.45	
0.25	
2.30	2.82
2.45	
0.30	
158.-	308.10
6.50	
0.15	
42.50	111.44
6.50	

440.42

The National museum

Main Buildings

m³

R.C. for walls

cont'd

21.00	
0.25	44.10
8.40	
0.25	
31.00	26.74
3.45	
0.20	
5.80	4.-
3.45	
0.25	
12.50	10.72
3.45	
7.50	
0.30	7.76
3.45	
20.00	
0.30	20.7
3.45	
0.30	
8.00	8.28
3.45	

122.36

2/ 0.25	
7.80	31.2
8.00	
0.25	
8.00	16
8.00	
0.25	
105.00	288.75
11.00	
0.30	
43.00	136.74
10.60	
0.30	
29.00	43.50
5.00	

516.19

The National museum

Foundations

295. - m³

R.C. for Walls under S.O.G.

Service Annex

30cm thick.

0.30
27.00
6.20

50.22

25 cm thick.

0.25
172.30
3.00

0.25
201.80
2.00

230.13

50.22
230.13
280.35 x 1.05
= 294.4

m³

Walls,
various thickness
Annex.

F-E

24.-
0.25
3.75

59.-
0.20
7.50

6.-
0.25
3.75

9.60
0.25
3.75

15.-
0.25
3.75

11.-
0.25
11.50

2/ 18.50
0.25
11.50

9.40
0.20
7.50

291.78

Axis A

B-A

7-8

B-E

4-5

F

14.-
0.25
11.50

7.-
0.20
7.50

14.-
0.25
11.50

5.40
0.20
7.50

5.-
6.20
3.75

D.O.T.
1.-
2.20
0.20

4.40
0.20
3.75

2 / D.O.T.
1.-
2.20
0.20

2.-
0.20
3.75

2 / 1.-
0.20
3.75

107.83

127

Parapet walls

29 m³

Reinforced Concrete.

Parapet wall.

Dwg. S107.
S309.

Det W1-W7.

32.-

1.60

0.25

36.-

1.60

0.25

2720 x 1.05

The National Mus.

Structural Works

Main Build.

Drop beams

217 m³

Reinforced concrete
Drop Beams.

2 / 47.80
1.20
0.10
5.-
6.30
0.40
8.00
0.60
0.50
2 / 12.80
0.15
1.50
2 / 11.60
0.15
1.50
2 / 10.-
0.60
0.35
2 / 10.-
0.30
0.25
2 / 15.40
0.60
0.35
2 / 15.46
0.20
0.25
10.-
1.-
0.25

Roof Slab.

B36-41
B14-139.

H4

B28

H14

Second Floor

H9

H10

H11

41.66

129

The National Mus.

Main Build.

H6, H7

H8

H1

H2

B13

assumed
Vol - Vol²

H20 assumed
(V1-V2)

114.91

41.66
114.91
35.62
14.86

207.05

X
1.05

217.-

10.40
0.40
0.30
13.40
0.30
1.20
2 / 3.-
0.30
1.20
2 / 16.-
0.20
0.50
2 / 16.40
0.20
0.50
4.60
0.30
1.30
8 / 7.-
1.-
4.50
8 / 9.-
0.20
1.-

The National Mus.
Structural work

Bridge
Reinforced conc.

m³

Drop Beams

N10 - N19

N20 - 21 - 22

34.50

0.35

0.30

10 / 4.00

0.35

1.25

21 / 1.20

0.50

0.35

21 / 1.20

0.50

0.80

35.62

34.50

0.75

0.35

21 / 1.20

0.60

0.50

16.62

Ditto,
up stand.

The National Mus.
Structural Works

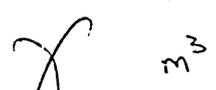


Reinforced Conc.
Drop Beams

Service Annex
First Floor
Dwg. 5105

24.40
0.24
2.40
10.-
0.20
0.40

14.855



~~Rein~~
Ditto
up stands.

27.-
1.675
0.25

N9

10.05



Isolated beams

7 m³

Reinforced conc.
Isolated Beam

B H12
Dwg. 5105.

5.50
0.60
0.40

7.—
0.50
1.50

The National Mus.
Structural works
Main Building.

X8-X9 "assumed"

5.25

1.32

1.32
5.25

6.57
X
1.05

6.90

Solid slab, 200 mm thick

104 m³

Reinforced concrete
 Solid slab.
 200 mm thick.

Second Floor.
 Dwg. S107
 "Bridge"

295.78
 1. —
 0.20

D.O.T

11.39
 1. —
 0.20

10.21
 1. —
 0.20

10.46
 1. —
 0.20

10.90
 1. —
 0.20

10.91
 1. —
 0.20

10.18
 1. —
 0.20

10.37
 1. —
 0.20

2 / 10.31
 1. —
 0.20

10.77
 1. —
 0.20

37.99
 47.44
 13.36

98.79

x
 1.05

104

37.99

m³

Reinforced concrete
Solid Slabs
200 mm thick
main Building.

49.60

1. -
0.20

A15

45.60

A36

1. -
0.20

13.95

A37

1. -
0.20

48.27

A34

1. -
0.20

2 / 4.60
1. -
0.20

2 / 10. -
0.70
0.20

Det. H10, H9.

2 / 15.40
0.70
0.20

47.436

Reinforced conc.
Solid Slabs.
200 mm thick

Service Annex.
First Floor.

m³

A3

6.56
1. —
0.20

19.54
1. —
0.20

40.68
1. —
0.20

13.36

Solid slab, 250 mm thick

15
M3

Main Building
Dwg S-109

11.50
5.00
0.25

14.38 x 1.05 = 15 ✓

Solid Slab, 300 mm thick

821 3

Reinforced conc.
Solid Slab.
300 mm thick.
To bridge Area

298.73
1.-
0.50

First Floor

A12

~~A12~~

89.62

The National Miss.

Bridge

89.62
346.44
123.62
33.03
188.88

781.59
x
1.05

821

The National Mus.

Structural works

Main Build.

m³

Reinforced concrete
Solid slab.
300 mm thick.

Roof level
Dwg. S109

18.77

1. -
0.30

13.78

1. -
0.30

22.32

1. -
0.30

~~171.75~~

~~1. -
0.30~~

22.32

1. -
0.30

14.47

1. -
0.30

18.42

1. -
0.30

33.03

m³

Reinforced concrete
Solid Slab.
300 mm thick
First Floor
Area from digitizer.

519.60
1. —
0.30

9.77
1. —
0.30

96.22
1. —
0.30

4. —
1. —
0.30

A1

A2

A10

188.88

Ditto, Sloped
300 mm thick

96 m³

Reinforced concrete
Solid Slabs
300 mm thick.
Sloping.

132.68

1. —
0.30

141.75

1. —
0.30

Dwg. S109, S309
Det W12-7.

Level 9.54

91.329 x 1.05 = 96

The National Mus.

Structural Works

Main Build.

Solid slab, 400 mm thick

1247 m³

Reinforced concrete
Solid slabs.

400 mm thick.

First floor.

Dwg. S105.

27.44

1. —

0.40

10976



The National Museum

Structural Works

Main Building

1236.—

11.—

1247

~~10976~~

1236. - m³

R.C. for solid slab 40/cm thick

2942.05
0.40

$$\overline{1177.052} \times 1.05 = 1235.9$$

Vaulted slaps

35 MJ (Assumed)

Trough slabs, 475 mm thick

86 m³

Second floor.

Reinforced conc.
Ribbed slab
475 mm thick
First Floor.
Dwg. S105.

30 / 0.60
0.40
3.10
57 / 0.60
0.40
3.40

254.36
1. —
0.475

A6

~~136.87~~
~~- 68.83~~
68.04

D.D.T
16.58
1. —
0.475
50.93
1. —
0.475

204.28
1. —
0.475

Second floor.
Dwg. S107.

254.36
+
204.28
16.58
50.93

391.13 M2
x
0.21 M3/M2

Volume of moulds.
"First Floor"

82.14
x
1.05

16 / 0.60
0.40
4.15
22 / 0.60
0.40
3.00
34 / 0.60
0.40
2.10

- 68.83

86. —

136.87

145

Trough slab, 900 mm thick

913 m³

Ribbed slab,
900 mm thick.

Roof slab
Dwg. S109.

1780.83

1. —

0.90

A1

D.D.T.

60.39

1. —

0.90

11.43

1. —

0.90

27.96

1. —

0.90

13.82

1. —

0.90

8.29

1. —

0.90

8.24

1. —

0.90

6.37

1. —

0.90

6.91

1. —

0.90

481.09

1. —

0.90

A12

D.D.T.

13.78

1. —

0.90

11.96

1. —

0.90

1883.493

146

18.77

1. —

0.90

22.32

1. —

0.90

14.49

1. —

0.90

3.67

1. —

0.90

8.24

1. —

0.90

8.69

1. —

0.90

262.20

1. —

0.90

D.D.T.

~~56~~

0.80

0.76

4. —

~~15~~

0.80

0.76

3.60

~~98~~

0.80

0.76

7.10

~~45.141~~

0.80

0.76

5.00

The National Mus.

Structural Works

Main Building.

1883.49

- 1014.41

869.08

x

1.05

913. —

Top of Roof.

Volume of Abutts.

- 1014.41

Trough slab, 1000 mm thick

735 m³

Reinforced conc.
Ribbed Slab.
1000 mm thick.

1857.93

1. -

4. -

D.D.T.

148.02

1. -

1. -

5.27

1. -

1. -

17.35

1. -

1. -

~~92~~ 0.80

0.76

7.20

~~36~~ 0.80

0.76

4.80

~~60~~ 0.80

0.76

4.90

Volume of moulds.

$700.36 \times 1.05 = 735$

~~11~~ The national mus.
structural works.

Main Building.

Stair Cases

Stairs & landing

91
~~10~~ m³

R.C. for stairs

steps.

Staircase 1

74 1/2 / 0.30
0.15
1.175

Staircase 2.

76 1/2 / 0.30
0.15
1.175

staircase 3.

76 1/2 / 0.30
0.15
1.175

Staircase 4

44 1/2 / 0.30 6.03
0.15
2.375 2.35

Staircase 5

24 1/2 / 0.30
0.20
1.30

0.94

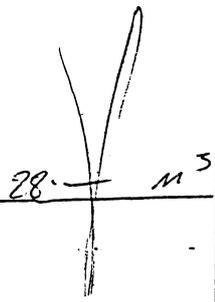
$9.316 \times 1.05 = 9.78$

10.-
28.-
53.-

91.-

The National museum

Stair cases



R.C for Stairs.

		<u>Flights</u>	
	0.20 2.20 1.175	0.44	(Staircase 1)
3/	0.20 2.70 1.175	1.62	2.3 & 4
4/	0.20 3.80 1.175	3.04	5, 6, 7 & 8
	0.20 2.20 1.175		(Staircase 2)
3/	0.20 2.70 1.175		
4/	0.20 3.80 1.175		(Staircase 3)
	0.20 2.40 1.175		
3/	0.20 2.70 1.175		
4/	0.20 3.80 1.175		

18.-

149

0.20 4.70 2.375	2.23
0.20 5.90 2.375	2.8
0.20 3.80 2.375	1.81
0.20 2.10 1.30	0.55
0.20 5.55 1.30	1.44

(Staircase 4)

(Staircase 5)

Collection

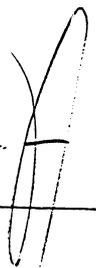
18.-
8.83

26.83 x 1.05
= 28.20

8.83

The National museum

Staircases

53.  m3

R.C. for stairs

2.75
 1.42
 0.35

 $2/2.75$
 3.25
 0.35

 $3/2.75$
 1.60
 0.35

 $2/2.75$
 2.35
 0.35

Landings
Staircase 1

2.60
 5.25
 0.35

 2.00
 2.375
 0.35

Staircase 4

$4/2.75$
 1.42
 0.35

 $2/2.75$
 2.48
 0.35

 $2/2.75$
 1.58
 0.35

 $4/2.75$
 1.42
 0.35

 $2/2.75$
 2.48
 0.35

 $2/2.75$
 1.58
 0.35

Staircase 2

1.60
 1.80
 0.35

Staircase 5

7.45

Collection

43.34
 7.45

 50.79×1.05
 $= 53.33$

43.34

Upstands, various thicknesses

56 m³

Reinforced conc.
UP Stands.

Dwg. 5109

H4

5.00
0.30
1.50

~~47.60~~
~~1.20~~
~~0.10~~

10. —
1. —
0.50

13.40
0.30
1.50

2 / 3. —
0.30
1.50

2 / 16. —
0.20
0.55

2 / 16.40
0.20
0.55

4.80
0.30
1.50

~~Second Floor~~
~~Dwg. 5107~~

H11

H8

H1

B13

25.27

151

The National Mus.

Structural Works

Main Build.

9. —
0.20
0.80

H20 "assumed"

1.44 ✓

1.44
25.27
10.05
16.62

53.38

x
1.05

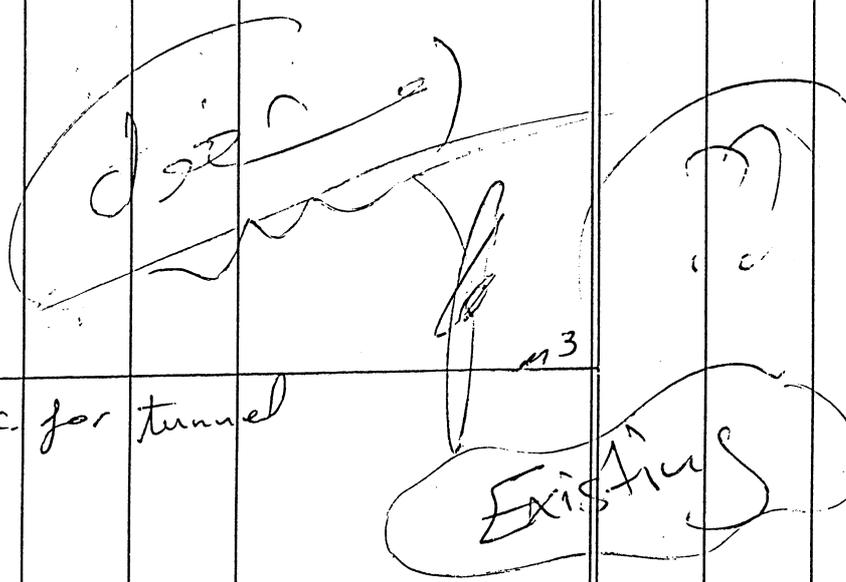
✓ 56. —

The National Museum

Foundations



Solid slab



R.C. for tunnel

S.O.G

16.50
123.20
0.50

16.25
123.20
0.50

1001.- x 1.05 = 1051.05

Walls

1016.40 x 1.05 = 1067.22

2/123.20
0.40
3.50

123.20
0.35
3.50

495.82 x 1.05 = 520.67

Concrete grade ~~C30~~ C30, Ch. Strength, 30 MPa

Columns

The National Museum

Ground Floor

401
~~327~~ m³

R.C. for columns

Main Building

1. 12/ 0.60
0.60
3.45

C8 & C9

323
65
13

3/ 0.425
0.60
3.45

C7

401

2/ 0.30
0.70
3.45

C5

Collection

4/ 0.60
0.60
6.50

C1

9.975
33.32
53.18
84.18

9/ 0.60
0.60
6.50

C2

8.04
4.10

0.60
0.60
6.50

C3

115.587

2/ 0.425
0.60
6.50

C11

308.382 x 1.05
= 323.80

9.975

The National Museum
main building

m³

R.C. for columns.

First Floor

12/0.60
0.60
3.45

C8, C9

2/0.425
0.60
3.45

C11

2nd Floor

12/0.60
0.60
3.45

C8, C9

2/0.425
0.60
3.45

C11

33.32

Roof.

12/0.60
0.60
5.00

C8, C9

2/0.425
0.60
5.00

C11

4/0.60
0.60
5.00

C1

10/0.60
0.60
5.00

C2

0.425
0.60
5.00

C3

2/0.425
0.60
5.00

C7

53.18

National Museum

Ground Floor

Main Bldg

m³

R.C for Columns

4/0.70 0.70 4.00	C1
9/0.70 0.70 4.10	C2
0.70 0.70 4.10	C3
4.10/0.70 0.70 4.60	C4
2/0.70 0.70 4.50	C5
0.70 0.70 4.10	C6
2/0.70 0.70 4.10	C7
3/0.60 0.60 4.20	C8 & C9
3/0.60 0.60 4.40	
3/0.60 0.60 4.60	

84.18

3/0.60
0.60
4.10

C8 & C9 cont'd

0.60
0.60
4.10

C10

0.425
0.60
4.20

C11

0.5028
0.5028
4.20

sec. 8

8.04

The National museum

Main Building

R.C. for columns m³

7/0.25
0.55
4.25

C15

4.10

2/4/0.90
0.90
7.90

2/0.90
0.90
3.75

9/0.90
0.90
8.00

C14

115.587

651- m3

R.C. for column necks
Semia Annex

7/0.25
0.55
2.816

C15

2.2/0.90
0.90
6.20

C14

20/0.25
0.25
2.10

C16

17/0.90
0.90
2.54

3/0.40
0.40
2.00

C17

6.30

55.06

55.06
6.3
61.36 x 1.05
= 64.43

m³

Reinforced conc
Columns

To Service Annex.

Dwg. S105
S102.

3 / 0.40
0.40
3.75

C17

20 / 0.25
0.25
3.75

C16

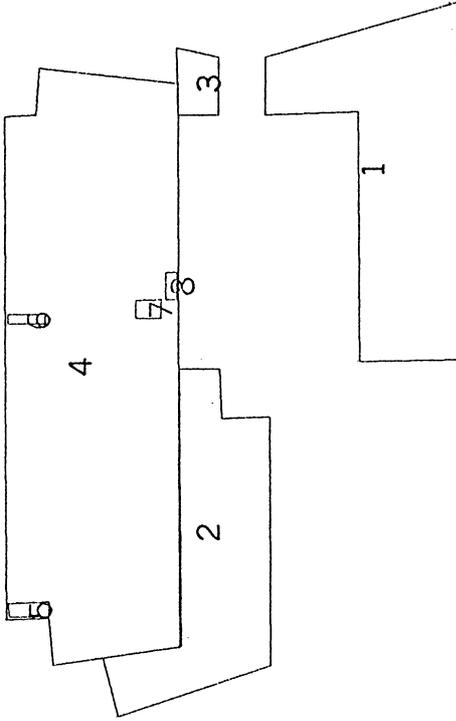
2 / 0.90
0.90
3.75

C14

12.563

Sl. on grade Drawing No. S-103

Original Scale
Metric
Horizontal
1 : 200.00
Vertical
1 : 200.00



159

Dig no.	Sort	Notes	Factor	Length m	Width m	Area m ²	Total	Total m ³
01/0011		20 cm thick				1276.22	1276.22	
01/002						907.87	907.87	
01/003						78.80	78.80	
01/004		40 cm-thick				2994.20	2994.20	
01/005						-18.10	-18.10	
01/006						-10.96	-10.96	
01/007						-14.00	-14.00	
01/008						-8.51	-8.51	
								2262.81
								2942.63

museum

1

LM

Site on grade Drawing No. S-103

Dig no.	Sort	Notes	Factor	Length m	Width m	Area m ²	Total	Total m ³
160							5205.52	

museum

The National
Museum.

Floor Finish.

7
=

Trowelled concrete w/ hardner.

38m²

36.0
1.0

G13

4 m³

$$36 \times 1.05 = 37.8$$

5011

Floor Finish.

Reinforced concrete screed

80mm thick.

2738 m²

The National
Museum.

Cement and sand screed
Protection

20mm thick

141 (Assumed)
94.- 3
m

Screed 2cm thick under S.O.G

The National Museum.

Foundations

Main Building

20cm thick S.O.G.

Service Annex

20cm thick S.O.G

986.67
0.02

~~127.22
0.02~~

From waterproofing

6700. M2

2203.86
6.02

30cm thick S.O.G.

x

0.02

134.-

x

1.05

141
Collection

25.52

63.81

89.33 x 1.05

= 93.80

25.52

63.81

Cement and sand screed
Protection

50 mm thick

46 m³

(Assumed QTY)

Concrete works

- 50.6 20 / 30 / 10 ✓

- SS. 40 / 30 / 20 / 25 ✓

- Trough ~~to~~ s. 47.50 / 100 / 90 ✓

Sloped s.s 30 cm ✓

Reinforcement bars

- High yield steel bars
- Mild steel
- Mesh 1x5 at 10 EW

From Arch Dwg's

Light foam concrete

Arch solid slabs & lintels

15 cm Hardcore ✓
~~150 mm basecourse~~

10 cm blinding under foundation ✓
5 cm s.o.g. ✓

waterproofing H. K.V. ✓

2 cm Protection layer ~~to~~ on horizontal w. proof ✓

30 cm ~~set~~ s.o.g. ✓

37 cm single size coarse ✓

aggregate
polythene sheet ✓
10 cm s.o.g. ✓

under cast in place Terrazo

100 mm block against waterproof
vertical sides ✓

~~5cm screed on outer side~~
of

5cm screed protection on ✓
upper side of footing and
strip footing connected with
soil

Backfilling ✓
with Basecourse ~~100~~

Expansion Joint ✓

- Mastic ✓
- 5cm compressible filler ✓

Division No 4.

Masonry Works

100 mm

Painted against water proof

The National museum

Foundations

4593

~~1475~~ M2

~~4593~~ (m³)

Block Work around isolated footing

10cm thick

cont'd

main Bldg.

2/ 13.60
0.70

F23

3/ 10.00
0.50

F24

15.20
0.70

F25

19.60
1.00

F26

2/ 16.80
0.90

F27

18.00
0.90

F28

2/ 35.40
0.40

F29

Collection

174.44

230.12

82.32

251.86

119.94

370.30

169.75

807.20

1195.01

645.16

327.87

4373.97 x 1.05

= 4592.67

174.44

m³

Block work around isolated footings
↓
10 cm

Service Annex

24/4.00				2/21.20	
0.30		FA1		1.00	F11
3/7.60		FA2		2/23.20	F12
0.40				1.10	
3/9.20		F3		17.60	F13
0.50				0.80	
17/6.00		F4		9.20	F14
0.30				0.50	
21.40	82.32	F5	Main Bldg.	12.80	F15
1.00				0.60	
10/11.20		F6		22.00	F16
0.50				1.00	
4/22.80		F7		19.60	F17
1.10				1.00	
2/22.00		F8		3/10.80	F18
1.00				0.50	
2/21.60		F9		24.00	F19
1.00				1.00	
2/12.80		F10		23.40	F20
0.60				0.90	
				2/9.60	F21
				0.50	
				25.00	F22
				1.00	

230.12

251.86

The National Museum

Foundations

Block work ground strip footings
10cm thick

m²

2/18.80	TA1	
0.30		
2/18.70	TA2	
0.30		
2/162.40	TA3	Main Bldg.
0.30		
2/164.50		
0.30		
121.-	T4	
0.80		
44.40	T5	
0.80		
27.60	T6	
0.80		
55.00	T7	
0.80		
6.80	T8	
0.80		
5.50	T9	
0.80		
73.20	T10	
0.80		
6.00	T11	
0.80		

370.30

171

339.50
0.50

T4, T5, T6, T7, T8, T9,
T10 & T11

169.75

The National museum

Foundations

main Bldg.

m²

Block work 10 cm thick around
walls under S.O.G.

Service Annex

65.00

0.37

2/ 172.30

3.00

2/ 27.00

2.54

2/ 201.80
2.00

807.20

1195.01

The National Museum

Foundations

m²

Block work behind walls.
↓
10 cm thick.

254.00

2.54

645.16

The National museum

Foundations

Block work 10 cm thick around
column necks. m²

12/3.60

2.54

4/3.60

6.20

C14

7/1.60

2.876

C15

20/1.00

2.10

C16

3/1.60

2.00

C17

327.87

150 mm thick internal Partition

1475 M² (ASSUMED)

~~2048~~ m²

The national museum

150mm thick block Walls

Basement Fl.
A-102

①

②

③

④

⑤

⑥

⑦

⑧

⑨

1.5
3.75

2/12.5
3.75

4/1.0
2.1

18.7
3.75

2.2
2.1

9.0
3.75

3.9
3.75

4.8
3.75

2.2
2.1

17.8
3.75

2/1.0
2.1

1.8
2.1

3/0.6
3.75

5.8
3.75

5.3
3.75

7.5
3.75

1.6
2.1

8.5
3.75

2.2
2.1

⑩

⑪

L = 11.2 + 1.3 = 12.5m

⑫

⑬

⑭

⑮

⑯

⑰

⑱

⑲

⑳

5/0.6
3.75

3/1.0
2.1

44.7
3.75

23.4
3.75

2/7.5
3.75

2/1.2
2.1

2/5.2
3.75

8.8
3.75

2/1.0
2.1

2/21.6
3.75

2/2/1.8
2.1

10.6
3.75

2.2
2.1

14.4
3.75

0.6
3.75

11.4
3.75

0.6
3.75

631.09

175

360.12

L = 2.7 + 2.6 + 2.8 + 0.7
= 8.8m

Collection:

631.09
360.12
369.06
589.95

1950.22

X 1.05

2047.73

8

8

1

2173. - M2

30mm thick Hollow Cement

Block Wall, Against Insullation

A25²
M. Exh.
Ground

47. -
7.60

45. -

7.80

47. -
5.90

45. -

5.90

28. -

5. -

20. -

10.12

7. -
3.12

8

1571.92

Second (X1)
A251

Ground (U2)
A-251

6 / 1.52
1.50

6 / 1.50
1.50

25. -
6.35

7.80
6.35

20. -
3.35

15. -
3.35

25.80
4.60

8
417.21

First + floor / meeting Room

Windows

Ground Floor
office

10m x 5m

Second Floor

Collection
1571.92
417.21
80.08

2069.21

41.05

2172.67

470

Thick block wall against insulation

Ground Floor

G-11
-0.50 to +3.35

1.80

3.85

2.40

3.85

7.60

3.85

6.20

3.85

2.80

3.85

store

8

80.08

91. $\overline{m^2}$

200 mm thick
block walls

21.2
3.45

Ⓐ G.F

3/20
2.1

7.5
3.45

Ⓑ

86.41

X 1.05

90.73

43. - M2

400mm thick cavity
walls, consisting of
2 layers of 150mm
thick blocks, 5
mm thick insulation

Service annex

9.0
4.6

41.40

x 1.05

43.47

Solid

45.71.2

in tenancy

on thick solid block against the tower
all insulation

11. -
7.85

Ground Floor -
Security Room

42.35

x 1.05

44.46

181

800. - - M 2

3mm thick Solid Black Wall

against stone Wall,

blind Wall

25. -
1.25

First Floor
meeting Room

25. -
1.25

2/
20. -
1.65

Gr. Fl.
office

25. -
5.60

44/A 252

8

268.5

Collection

268.50

324.40

124. -

716.9

x 1.05

752.74

9 45. -

797.74

M2

~~10 m Thick Solid
 Hollow Cement block
 wall, Against insulation stone walls
 Lin d Walls~~

24.-
5.35

A251
Gool
First

45.-
7.60

G. Floor / Main
A255 EK.

45.-
5.90

~~---~~
Sool / A255

35.-
5.60

G. / W4
G/A-253

324.40

24.80
5.-

First Floor
A-253

~~52.-~~
~~7.60~~

M11

M. Ek.
Ground

124.-

(assumed at)

220. - M2

5.0m thick Solid Block Internal
partition

Seminar Room
G-31

7.50

5.25

7.75

7.80

2.20

7.70

112.01

X 11.05

117.610

215 - M2

1/2 thick solid block against stone
115

13.60

7.53

8.20

7.53

10.00

4.28

2.00

2.10

Courtyard
-0.53 to +7.10

-0.53 to +3.75

door

202.75

+1.05

212.80

The national museum

Div: 4

Block works

100 mm blocks

150 mm blocks

150 mm protection blocks

200 mm blocks

cavity walls (100+100 + cavity) → 450 m²

370

~~260~~ m²

100 m²

Basement

150

1200 m²



Desert Yellow Collection

This magnificent limestone with its warm sandy color and hints of grey is quarried at Nassar's own quarries in the desert, and is available in the following shade variations of yellow: A31, A32, & A33.

Dark Desert Gold - A32:

Naqab stone *كريمة*

A medium yellow consistent color in which the degree of grey spots is considerably less than the Tiger stone - A31. The A32, as well as its other sister shades (A31, and A33), comes from the same block of stone. In general, it makes up 40% of the block.

- It is available in average quantities.
- It is recommended for use for both interior flooring and exterior cladding.
- It can be used in residential and commercial applications.
- The background color has some variation, and some tiles have slightly more pronounced gray intrusions than others.

Physical characteristics of the stone*

Test	Specifications	Results	Remarks
Water Absorption	ASTM C 97	0.80%	
Bulk Specific Gravity	ASTM C 97	2.639	Oven dry
		2.660	Saturated surface dry
		2.696	Apparent
Unconfined Comp. Strength	ASTM D 2938	28.7 N/mm2	Moisture content = 0.4%
Abrasion Resistance (Friction Wear)	ASTM (C241)	18.2	Tile Polished Surface
Linear Coefficient of Thermal Expansion	ASTM D 5335	4.23 x 10 ⁻⁶	(mm/m(C))
Knoop Hardness	UNI 9724-6	1900	N/mm2

*The above tests were carried out in the year 1998. The results reflect the general characteristics of the stone only. Further testing is recommended for specific projects since such results vary depending on the strata and quarry from which the sample tested was taken.

Blocks:

Average block dimensions:

- Length: 180-290 cm
- Width: 115-170 cm
- Height: 60-75 cm

Slabs:

Average slabs dimensions:

- Thickness 2 cm., 3 cm, 4.6 cm 6.60 cm.
- Length: 180-290 cm.
- Width: 115-75 cm.

Tiles:

Standard Sizes:

- 30.5 x 30.5 cm. in a 1 cm thickness (12" by 12")
- 30 x 60 cm. in a 2 cm thickness (12" by 24")
- 40 x 40 cm. in 1.5 cm thickness (16" by 16")
- 45.7 x 45.7 cm. in 2 cm thickness (18" by 18")
- 61 x 61 cm. in 2 cm thickness (24" by 24")
- Cut to Size is also available for projects of large volume

4269 M2

Smooth Stone Cladding

North. Elev.
Dwg. A201

X1-X8

Columns

South Elev.
X1-X12

West Elev.
Y01-Y05

32.50
4.80
6.00
11.70

DDT
2.00
3.00

2/ 7.80
15.60

DDT
2.30
3.40

1/2/ 1.60
1.60

4/4/ 1.10
4.00

2/4/ 7.10
4.00

DDT

2/4/ 2.75
2.75

2/ 3.50
3.00

2/ 5.75
3.00

2/ 8.00
9.00

2/4/ 1.10
4.50

8/4/ 1.10
3.50

East Elev

C-C

2904.10
1162.39

columns

4066.49
x
1.05

4269

$\frac{3.50 + 8.00}{2} = 5.75$

columns

57.00
16.00

16.80
16.50

7/4/ 1.10
4.75

2/ 2.80
9.00

10.70
5.00

46.00
15.00

16.40
15.50

16.50
15.50

25.50
5.30

8.00
16.20

2904.10

188

1162.39