**LABOR COST EXAMPLE: Massive-walled adobe #636 (see Supplementary Figure 3)**

Recorded information:

ELONG = 0.71

EWIDE = 0.71

FACTOR = 5.18

IPAREA = 0

PBEAM = 1

PDBACK = 0

PDENTRY = 0

PDFRONT = 0

PDSIDE = 0

PLLENGTH = 0

PLTHICK = 0

PLWIDTH = 0

PROLONG = 5.59

PROWIDE = 2.69

SUPPNUM = 2

WFACTOR = 0

WWIDE = 50

ADOBE CALCULATIONS

**PERIMETER** =(PROLONG x 2) + (PROWIDE x 2) – EWIDE + (ELONG x 2)

(5.59 x 2) + (2.69 x 2) – 0.71 + (0.71 x 2) = 17.27

**WADOBE** = [(PERIMETER x WWIDE x 1.8) / 100] – FACTOR

[(17.27 x 50 x 1.8)/100] – 5.18 = 10.36

**RAREA** =[PROLONG + (WWIDE/50) ] x [PROWIDE + (WWIDE/50)]

[5.59 + (50/50)] x [2.69 + (50/50)] = 24.32

**RADOBE** = RAREA x .05

24.32 x .05 = 1.22

**FADOBE** =PLLENGTH x PLWIDTH x PLTHICK/100

0 x 0 x 0/ 100 = 0

**TOTADOBE** =WADOBE + RADOBE+ FADOBE

10.36 + 1.22 + 0 = 11.58

**MIXING** =TOTADOBE / .05

11.58/ .05 = 231.56

**DIGGING** = TOTADOBE/ .52

11.58/ .52 = 22.27

**ADOBELAB** = MIXING + DIGGING

231.56 + 22.26 = 253.82 person-hours

WOOD CALCULATIONS

**BIGWOOD** = (SUPPNUM + PBEAM) x 50

(2 + 1) x 50 = 150

**MIDWOOD** =[(PROLONG x PROWIDE) + 8] x 15

[(5.59 x 2.69) +8] x 15 = 345.56

**BACKPN** =PDBACK x PROLONG

0 x 5.59 = 0

**FRONTPN=** PDFRONT x (PROLONG – EWIDE)

0 x (5.59 – 0.71) = 0

**SIDEPN** =2 x PDSIDE x PROWIDE

2 x 0 x 2.69 = 0

**ENTRYPN** =2 x PDENTRY x ELONG

2 x 0 x 0.71 = 0

**TOTALPN** =BACKPN + FRONTPN + SIDEPN + ENTRYPN

0 + 0 + 0 + 0 = 0

**SMALLWOOD** = TOTALPN x 10

0 x 10 = 0

**CLOSING** = RAREA x 29

24.32 x 29 = 705.20

**IPWOOD** = IPAREA x 29

0 x 29 = 0

**WCLOSE** =PERIMETER x WFACTOR x 29

17.27 x 0 x 29 = 0

**TOTWOOD**= BIGWOOD + MIDWOOD + SMALLWOOD + CLOSING + IPWOOD **+** WCLOSE

150 +345.56 + 0 + 705.28 + 0 + 0 = 1200.84

**CUTTING** = TOTWOOD/ 50

1200.84/ 50 = 24.02

**TRANSPORT** = TOTWOOD / 96

1200.84/ 96 = 12.51

**WOODLAB** = CUTTING + TRANSPORT

24.02 + 12.51 = 36.53 person-hours

BUILDING CALCULATIONS

**WALLAREA** = PERIMETER x 1.8

17.27 x 1.8 = 31.09

**BUILD** = (RAREA+ WALLAREA+ IPAREA) x2.5

(24.32+ 31.09+ 0) x 2.5 = 138.51 person-hours

TOTAL AND RELATIVE COSTS

**TOTLAB** = WOODLAB + ADOBELAB + BUILD

36.53 + 253.82 + 138.51 = 428.85 person-hours

**RELCOST** = TOTLAB/ (PROLONG x PROWIDE)

428.85/ (5.59 x 2.69) = 28.52 person-hours/square meter