# ARCHITECTURAL STONEWORK PORTICOS

In the XIX century, porticos were a frequent feature of houses for both aesthetic and practical reasons. Whilst providing welcome shelter from the elements, they also offered architects the opportunity to embellish an otherwise perhaps rather dull entrance, uplifting it to much grander proportions.

Today, the benefits and opportunities provided by utilising these architectural features are again being appreciated, for both public and private buildings.

The Haddonstone collection of porticos includes five designs using standard Haddonstone architectural elements. As can be seen from the photographs, it is often possible to combine individual elements to create a completely new design. Additional TecLite Architrave options are also offered for use as individual entablature pieces, see page 172.

Haddonstone also specialises in the manufacture of custom-made porticos to individual designs and requirements.

Note: The architrave will, in most cases, require backing with an in-situ reinforced concrete beam sufficient to carry the weight of the structure. Please ask for relevant Tech Sheet number for assembly recommendations.

For column details see pages 166-167.

TS CAD1 & Column Assembly Recommendations

Note: Haddonstone supply Steps and Risers for all Portico and Door Surround designs. See page 201 for further information.

Portico A

Portico A with M4 Columns, HN1 Steps and HN3 Risers

Octagonal Portico A with HN1 Steps and HN3 Risers

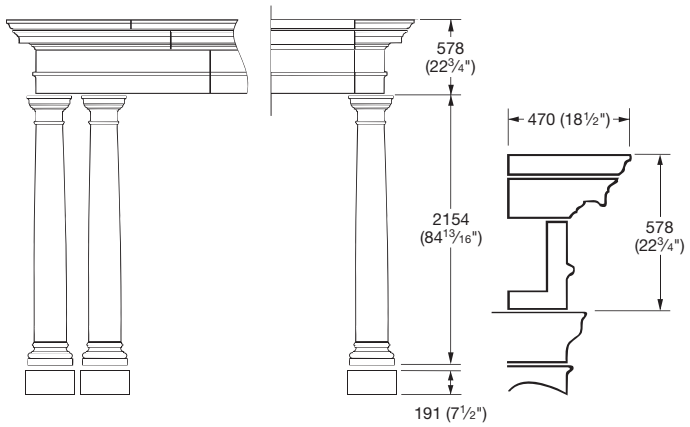


Custom-made products are available on request.

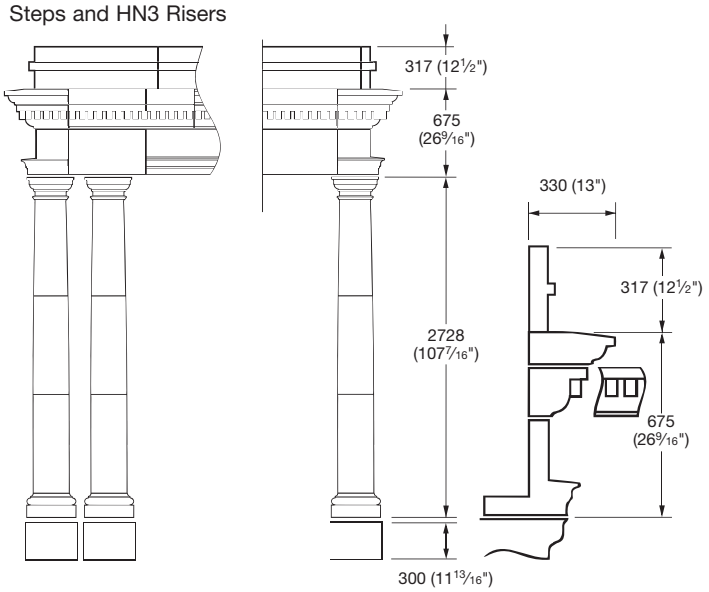
Refer to the Architectural Supplement for specific US designs.

Portico A with M4 Columns, additional Plinth Block and Plain Parapet, HN1 Steps and HN3 Risers

Portico B with M4 Columns and Half Columns featuring Ionic Capitals, HN1 Steps and HN3 Risers




FRONT ELEVATION SIDE ELEVATION ENTABLATURE




FRONT ELEVATION SIDE ELEVATION ENTABLATURE

## Portico A Components

L110 Upper Cornice
L120 Lower Cornice
L130 Architrave
M7 Column

TS Tech Sheet No. PT10 for Portico A

TS Tech Sheet No. PT11 for Portico A detail

## Portico B Components

L200 Blocking (optional)
L210 Upper Cornice
L220 Lower Cornice (with dentils)
L230 Architrave
M4 Column (shown with Tuscan Capital)

TS Tech Sheet No. PT20 for Portico B

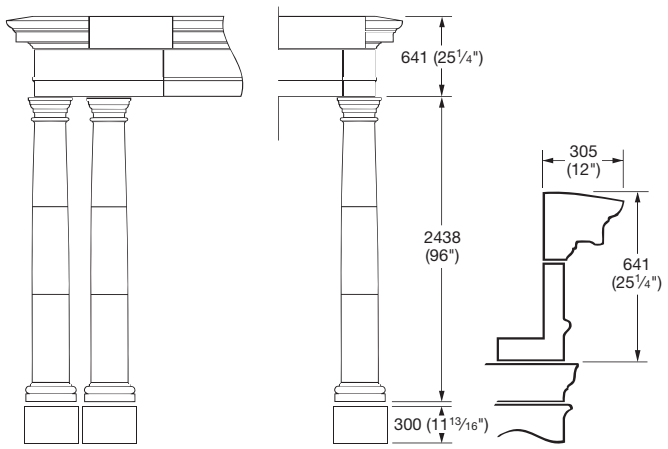
TS Tech Sheet No. PT21 for Portico B detail

Dimensions exclude joints. Allow 6mm (¼") for joints.

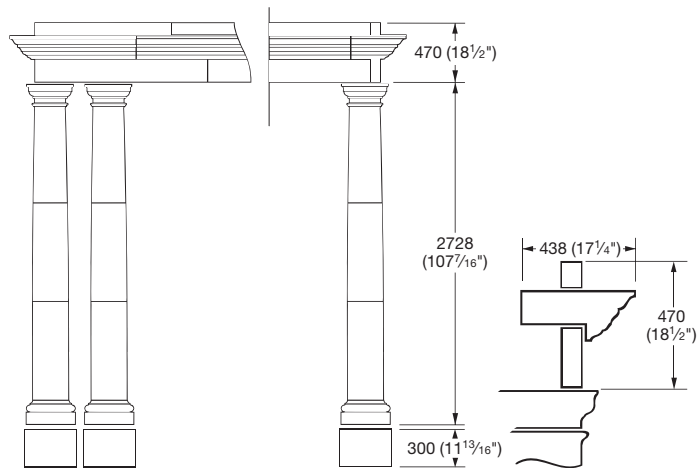
Custom-made products are available on request.

Portico E with L330 Architrave

Portico D with HN1 Steps and HN3 Risers




FRONT ELEVATION SIDE ELEVATION ENTABLATURE




FRONT ELEVATION SIDE ELEVATION ENTABLATURE

## Portico C Components

L310 Cornice
L330 Architrave
M5 Column (shown with Tuscan Capital)

TS Tech Sheet No. PT30 for Portico C

TS Tech Sheet No. PT31 for Portico C detail

## Portico D Components

L400 Blocking
L410 Cornice
L430 Architrave
M4 Column (shown with Tuscan Capital)

TS Tech Sheet No. PT40 for Portico D

TS Tech Sheet No. PT41 for Portico D detail



Custom-made products are available on request.

Dimensions exclude joints. Allow 6mm (¼") for joints.

Portico A with M2 Columns.

Custom Portico A with HN1 Steps and HN3 Risers.

Portico D, M7 Columns and Balustrading.

Portico A with square M7 Columns.

Portico C with M4 Columns.

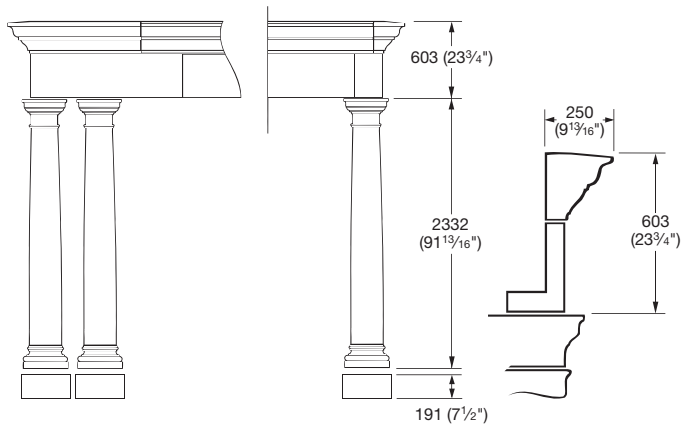
Custom portico with special square columns and balustrading.

Custom portico with M4 Columns with HN1 Steps and HN3 Risers.

# ARCHITECTURAL STONEWORK
# PORTICOS

Portico E with additional Blocking Course and M2 Columns

M7 Columns with L130 Architrave, L120 Lower Cornice, L220 Dentilled Cornice and L110 Upper Cornice with HN1 Steps and HN3 Risers




FRONT ELEVATION SIDE ELEVATION ENTABLATURE

## Portico E Components

L510 Cornice
L530 Architrave
M7 Column

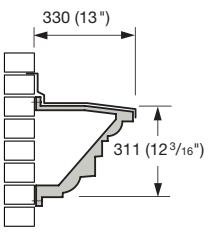
TS Tech Sheet No. PT50 for Portico E

TS Tech Sheet No. PT51 for Portico E detail

## TECLITE ENTABLATURES

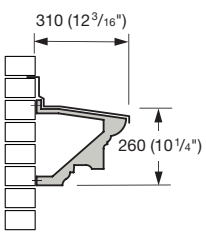
Haddonstone also offers Cornice and Architrave components in our revolutionary thin-walled TecLite material (see page 212).

TS Tech Sheet No. TL50



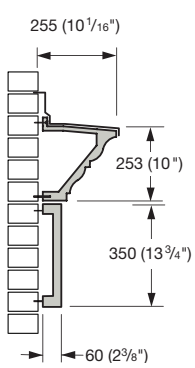

### Dentilled Cornice TLL215

Weight: 50kg/m (34 lb/ft)




### Cornice TLL310

Weight: 50kg/m (34 lb/ft)




### Cornice TLL510

Weight: 39kg/m (27 lb/ft)

### Architrave TLL450

(for use in conjunction with TLL215, TLL310 and TLL510).

Weight: 15kg/m (10 lb/ft)



Dimensions exclude joints. Allow 6mm (¼") for joints.

Custom-made products are available on request.

M4 Columns on special Piers with L210 Upper Cornice, L220 Lower Cornice and L330 Architrave


Custom portico with FC balustrading, HN1 Steps and HN3 Risers

Portico A, HN1 Steps and HN3 Risers

Special M4 Columns and Curved Entablature

Half M7 Columns, L330/L410 Entablature

Pedimented Portico

Portico E

# ARCHITECTURAL STONEWORK
# THE GIBBS RANGE OF CLASSICAL PORCHES

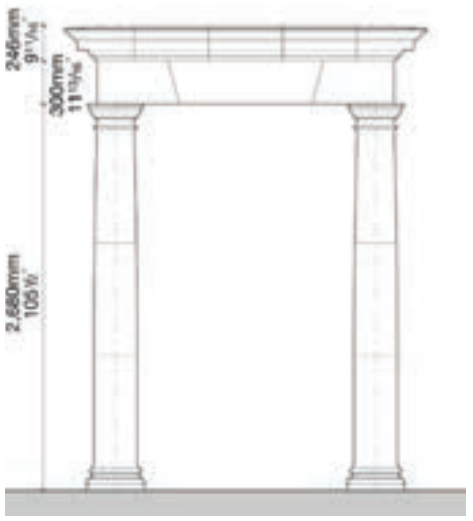
The Gibbs Range of classical porches is inspired by the designs of the famous Georgian architect James Gibbs (1682-1754). Gibbs's design handbooks about classical architecture were probably the most widely used in the eighteenth century cross the Western world. It is this rich legacy that makes Gibbs's version of the Classical Orders the most appropriate for this new range of porch designs, being equally suitable for both new and historic buildings across Great Britain, The United States of America, and around the world.

The Gibbs range of porches is designed to offer flexibility to architects, builders, and home owners for any situation. A simple matrix shows how the components may be combined to create a wide variety of designs, using the rules, geometry and proportions of classical architecture, to produce beautiful and original compositions. The Gibbs Range include both elaborate and more restrained details so that the character of the porch can be finely tuned to each site.

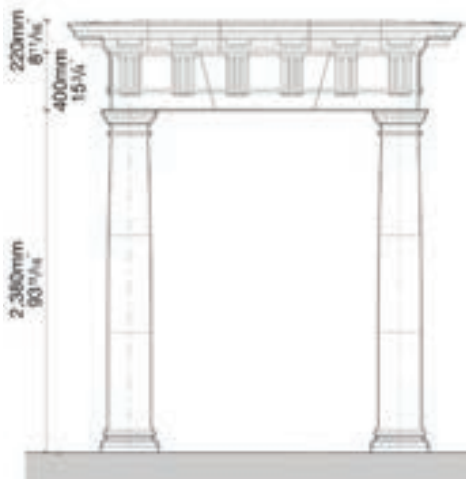
The Gibbs range is conceived around the two oldest and most widely used Orders — the Doric and Ionic. Over the centuries, generations of Classical architects have adapted the proportions of these two Orders to suit a variety of situations. The Gibbs range is rooted in this fertile tradition, and offers correctly proportioned designs at an affordable price. The Gibbs Range has been designed by Hugh Petter, a leading authority on classical architecture, and a design director of Adam Architecture, one of the largest firms of traditional architects currently practicing in the world.

A matrix of nineteen component parts can be assembled in ten different ways to produce porches in a Doric or Ionic order. Dimensions exclude joints:

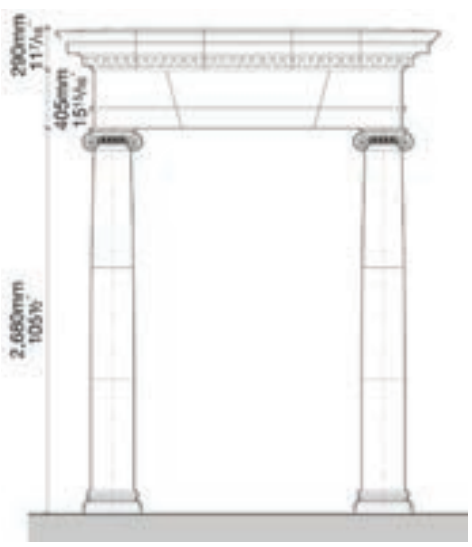

GIBBS I: 1:8 Doric porch with Box Cornice, Plain Architrave and Frieze
TS Tech Sheet No. C70



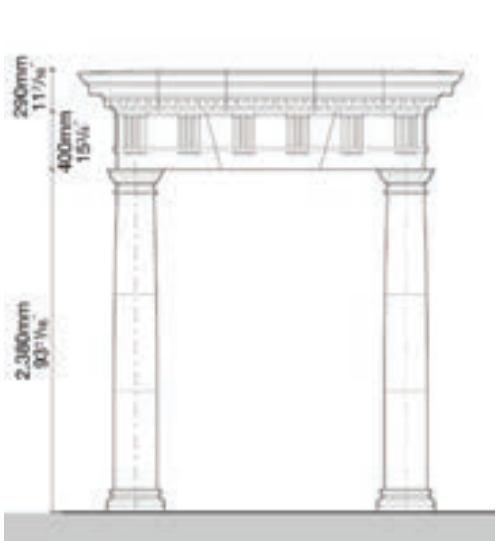

GIBBS I: 1:9 Doric porch with Box Cornice, Plain Architrave and Frieze



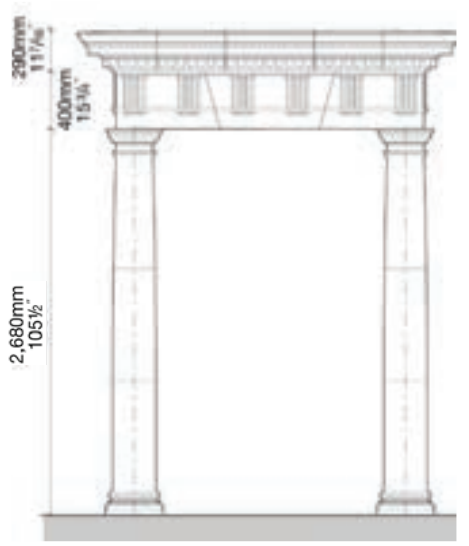

GIBBS II: 1:8 Doric porch with Mutule Cornice, Architrave and Triglyph Frieze




GIBBS III: 1:8 Ionic porch with Dentil Cornice, Architrave and Stepped Frieze




GIBBS IV: 1:8 Doric porch with Dentil Cornice, Architrave and Triglyph Frieze



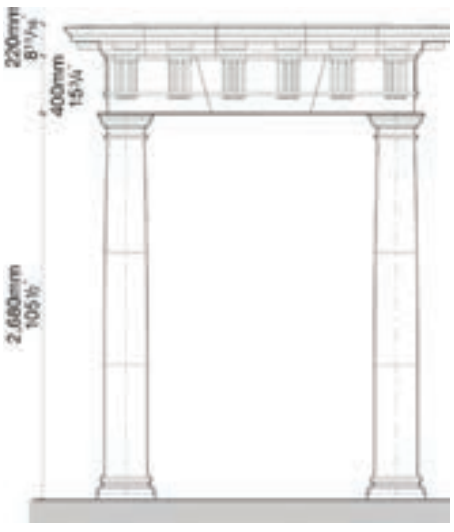

GIBBS IV: 1:9 Doric porch with Dentil Cornice, Architrave and Triglyph Frieze



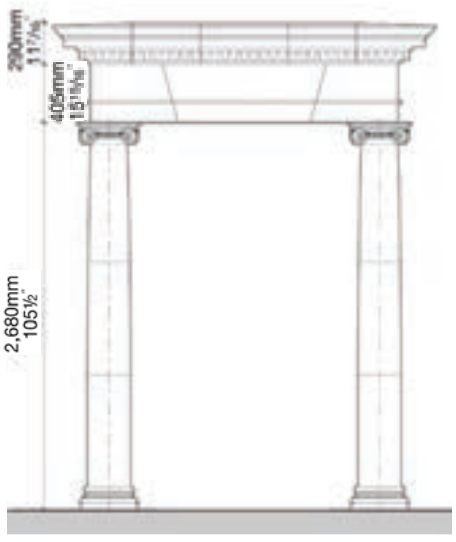
For more information including an Installation Guide see **www.haddonstone.com/Gibbs-Porch**



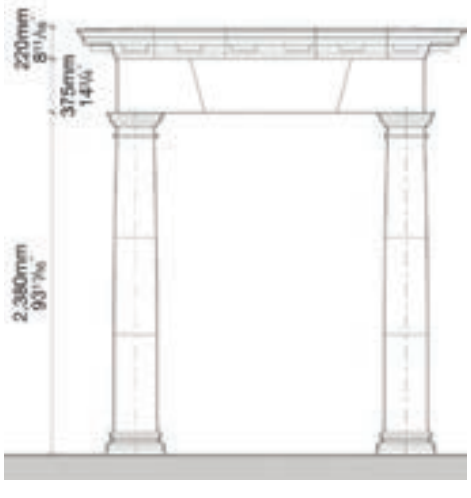
A Doric porch from the Gibbs Range enhances a private residence in Northamptonshire (please note:  shown with optional base blocks)



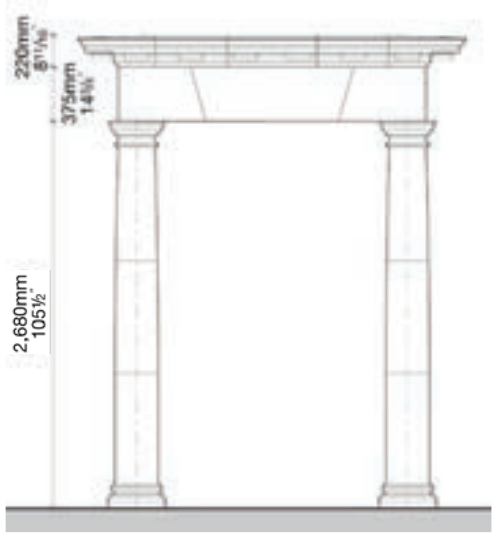

GIBBS II:  1:9 Doric porch with Mutule Cornice, Architrave and Triglyph Frieze




GIBBS III:  1:9 Angular Ionic porch with Dentil Cornice, Architrave and Stepped Frieze




GIBBS V:  1:8 Doric porch with Mutule Cornice, Large Plain Architrave and Frieze




GIBBS V:  1:9 Doric porch with Mutule Cornice, Large Plain Architrave and Frieze

James Gibbs was one of the first British architects to go to Italy before returning to London where, with help from Sir Christopher Wren, he became one of the two surveyors to the Commissioners for Building 50 New Churches in London in 1713. His masterly design of St Mary Le Strand in London (1714-24) launched his reputation; St Martins in the Fields in Trafalgar Square (1722-26) became the prototype for urban Anglican churches for the next century across the UK and America. Gibbs's prolific portfolio of secular buildings included the Radcliffe Library, Oxford (1737-8).

A Gibbs Doric porch at Tregunnel Hill, Newquay, commissioned by the Duchy of Cornwall.

For more information including an Installation Guide see **www.haddonstone.com/Gibbs-Porch**

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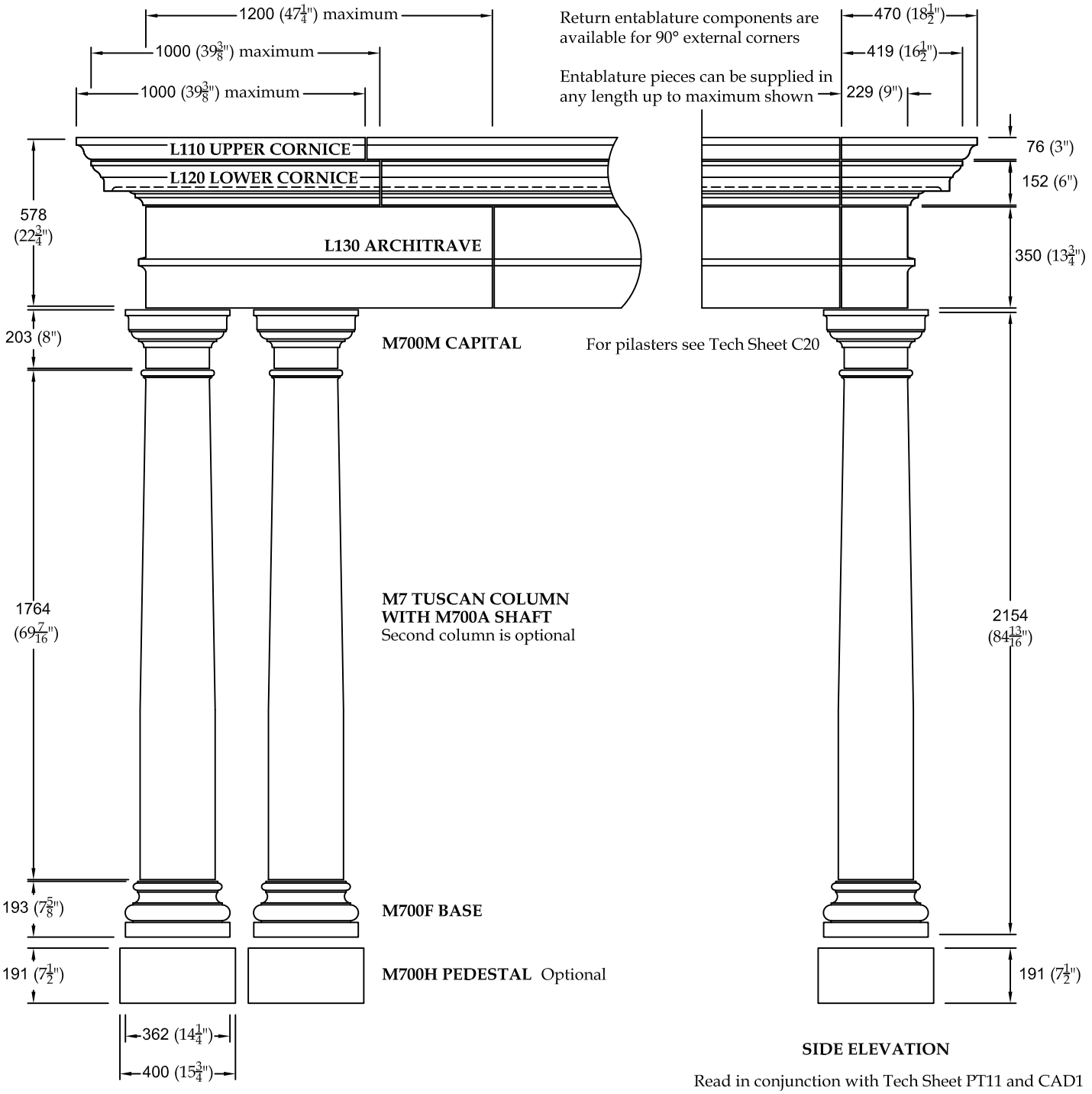
# PORTICO A

**MAXIMUM COMPONENT LENGTHS**

| | | L110 | L120 | L130 |
|---|---|---|---|---|
| A | PLAIN ENDED | 1000 (39⅜") | 1000 (39⅜") | 1200 (47¼") |
| B | L/H ENDED | 1000 (39⅜") | 1000 (39⅜") | 1200 (47¼") |
| C | R/H ENDED | 1000 (39⅜") | 1000 (39⅜") | 1200 (47¼") |

**WEIGHTS**

| | | |
|---|---|---|
| L110 | 72 kg/m | (48 lbs/ft) |
| L120 | 91 kg/m | (61 lbs/ft) |
| L130 | 74 kg/m | (50 lbs/ft) |
| M7 with M700A shaft | 195 kg | 430 lbs |
| M700H | 52 kg | 115 lbs |




For pilasters see Tech Sheet C20

**FRONT ELEVATION**
Left hand

**SIDE ELEVATION**

Read in conjunction with Tech Sheet PT11 and CAD1
All weights are approximate and should be used as a guideline only
All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

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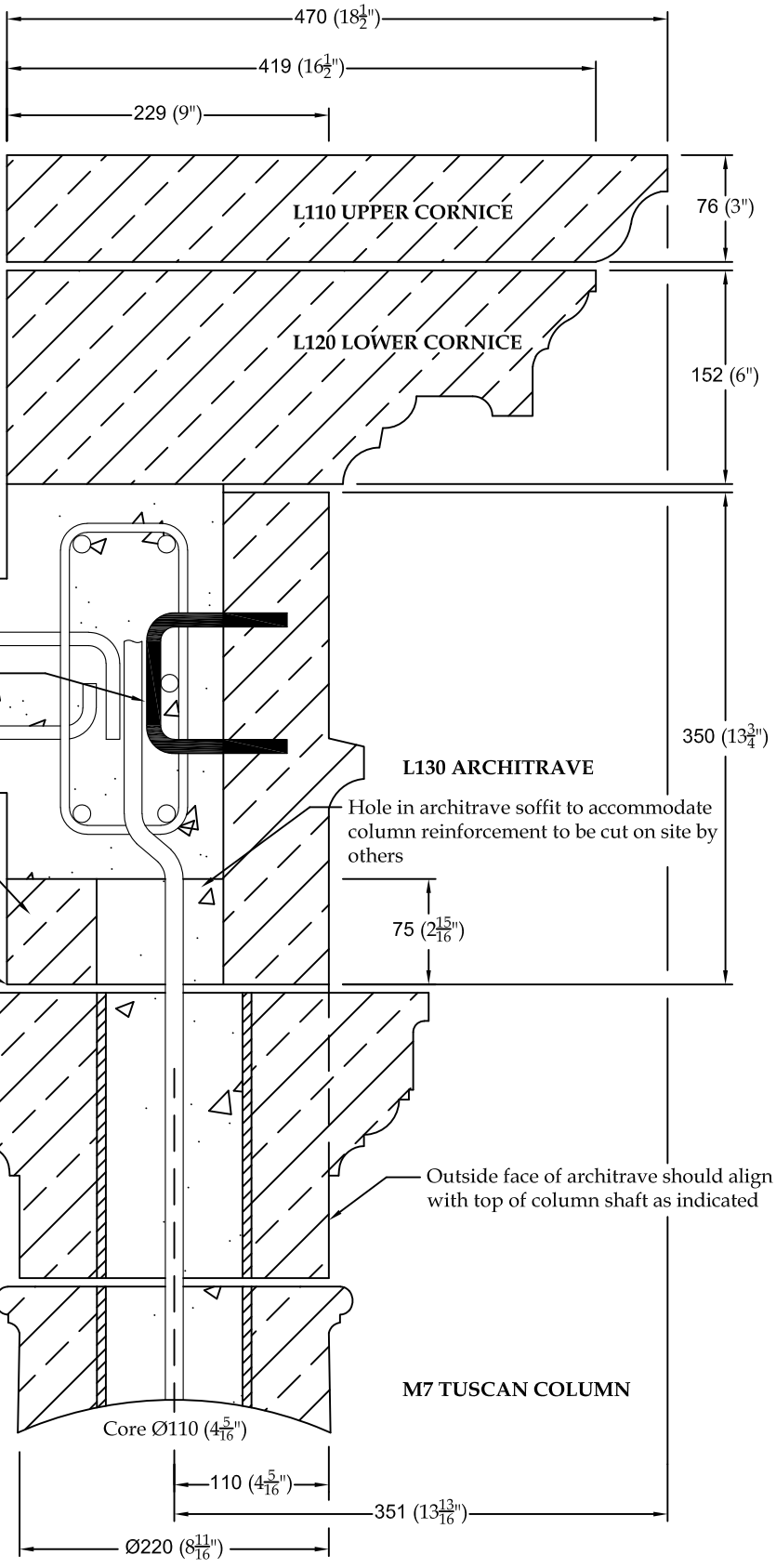
# PORTICO A DETAIL




Maximum entablature lengths indicated on Tech Sheet PT10

Top surface to be protected against frost damage and the ingress of water at the in situ concrete interface

Reinforced concrete beam by others

Roof construction and covering by others - minimum down turn 75 (3")

Stainless steel lugs [US: Epoxy coated] cast into architrave at 450 (18") maximum centres

Minimum floor thickness 100 (4")

We recommend the architrave should be erected as permanent shuttering to an in situ reinforced concrete beam which should be designed to carry the weight of the structure

Use 1:2:9 cement/lime/sand mortar to form soft joint

Hole in architrave soffit to accommodate column reinforcement to be cut on site by others

Column core reinforced and filled with hand compacted concrete designed by others

The shaft sections should be lined with polystyrene, styrofoam, or similar (not supplied), to act as an isolating medium when column cores are hand compacted with concrete

Outside face of architrave should align with top of column shaft as indicated

Unless otherwise stated, all materials other than stonework to be supplied by others

When drilling stonework, use suitable masonry drill on rotary setting only (not hammer action)

Foundations to be designed by others to suit site conditions and loadings

Read in conjunction with Tech Sheet PT10 and CAD1

All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

 Do not scale 

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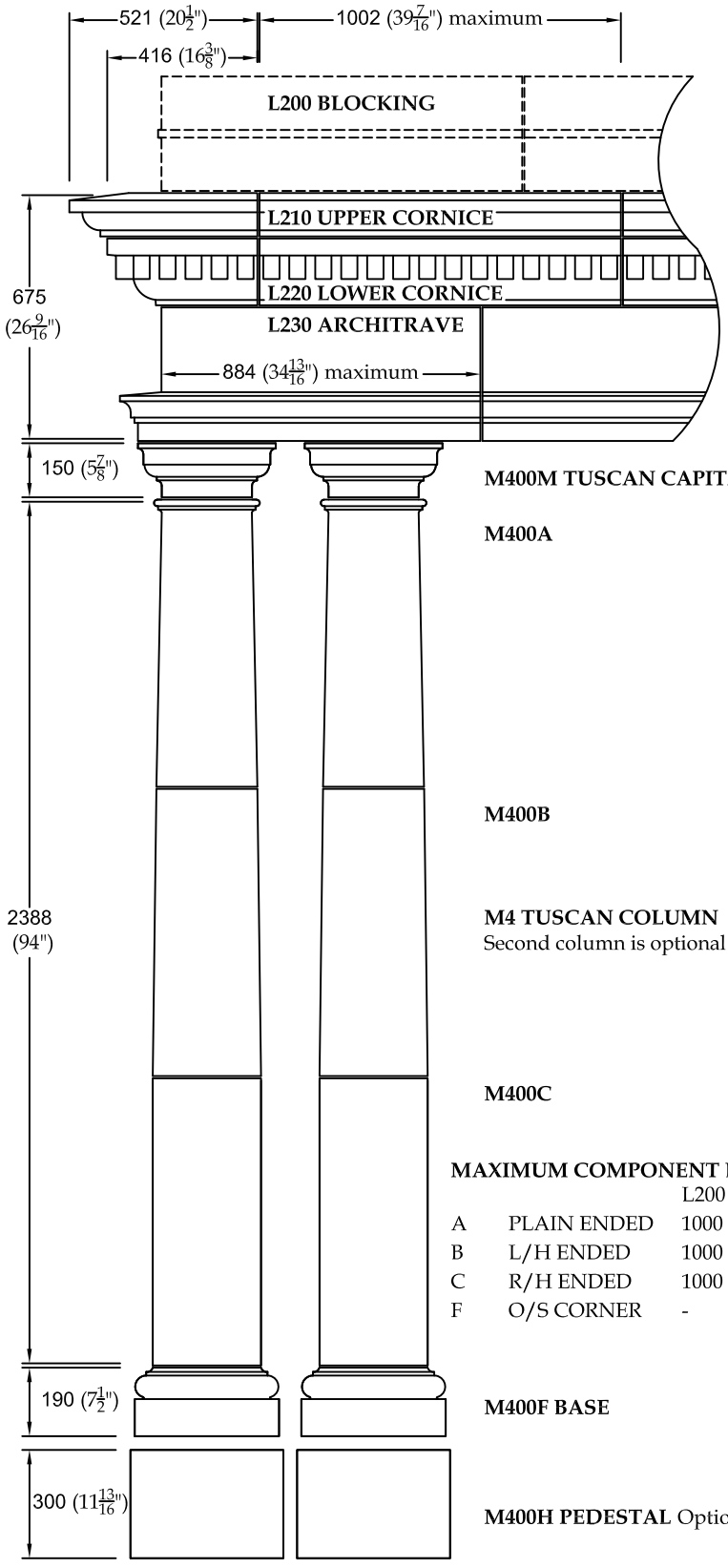
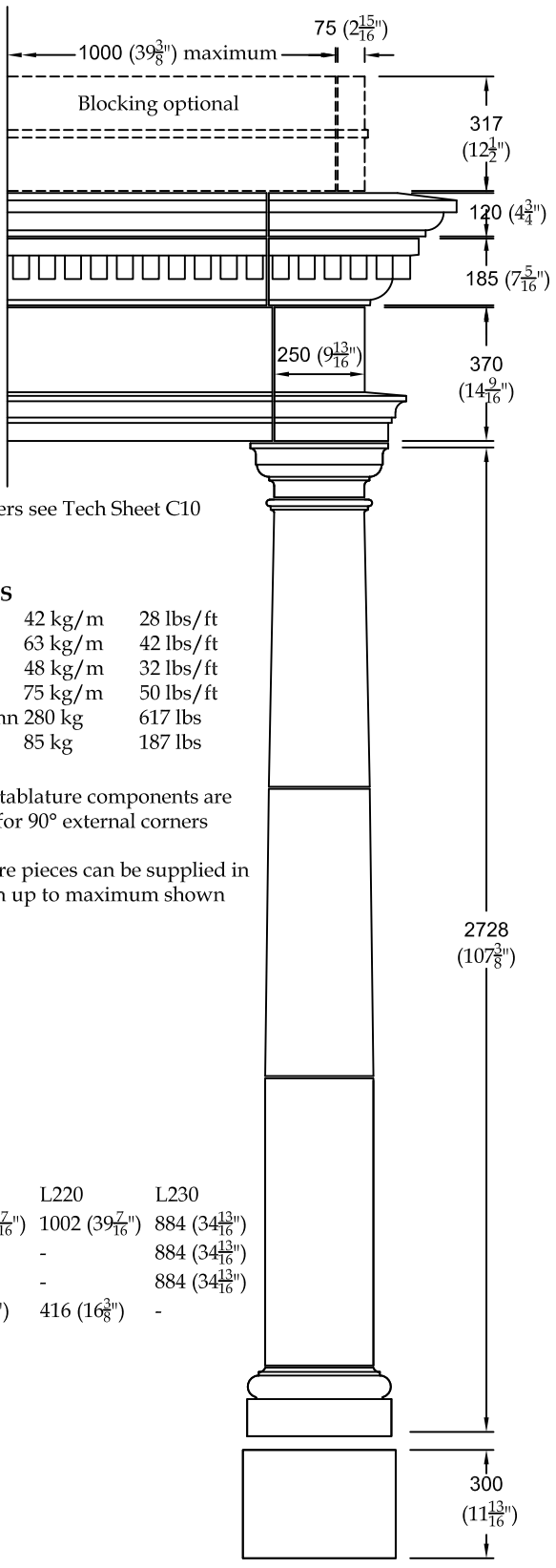
# PORTICO B




**M400M TUSCAN CAPITAL**

**M400A**

**M400B**

**M4 TUSCAN COLUMN**
Second column is optional

**M400C**

**M400F BASE**

**M400H PEDESTAL** Optional

For pilasters see Tech Sheet C10

**WEIGHTS**

| | | |
|---|---|---|
| L200 | 42 kg/m | 28 lbs/ft |
| L210 | 63 kg/m | 42 lbs/ft |
| L220 | 48 kg/m | 32 lbs/ft |
| L230 | 75 kg/m | 50 lbs/ft |
| M4 Column | 280 kg | 617 lbs |
| M400H | 85 kg | 187 lbs |

Return entablature components are available for 90° external corners

Entablature pieces can be supplied in any length up to maximum shown

**MAXIMUM COMPONENT LENGTHS**

| | | L200 | L210 | L220 | L230 |
|---|---|---|---|---|---|
| A | PLAIN ENDED | 1000 (39⅜") | 1002 (39⅞") | 1002 (39⅞") | 884 (34¹³⁄₁₆") |
| B | L/H ENDED | 1000 (39⅜") | - | - | 884 (34¹³⁄₁₆") |
| C | R/H ENDED | 1000 (39⅜") | - | - | 884 (34¹³⁄₁₆") |
| F | O/S CORNER | - | 521 (20½") | 416 (16⅜") | - |

**FRONT ELEVATION**
Left hand

**SIDE ELEVATION**

Read in conjunction with Tech Sheet PT21 and CAD1
All weights are approximate and should be used as a guideline only
All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

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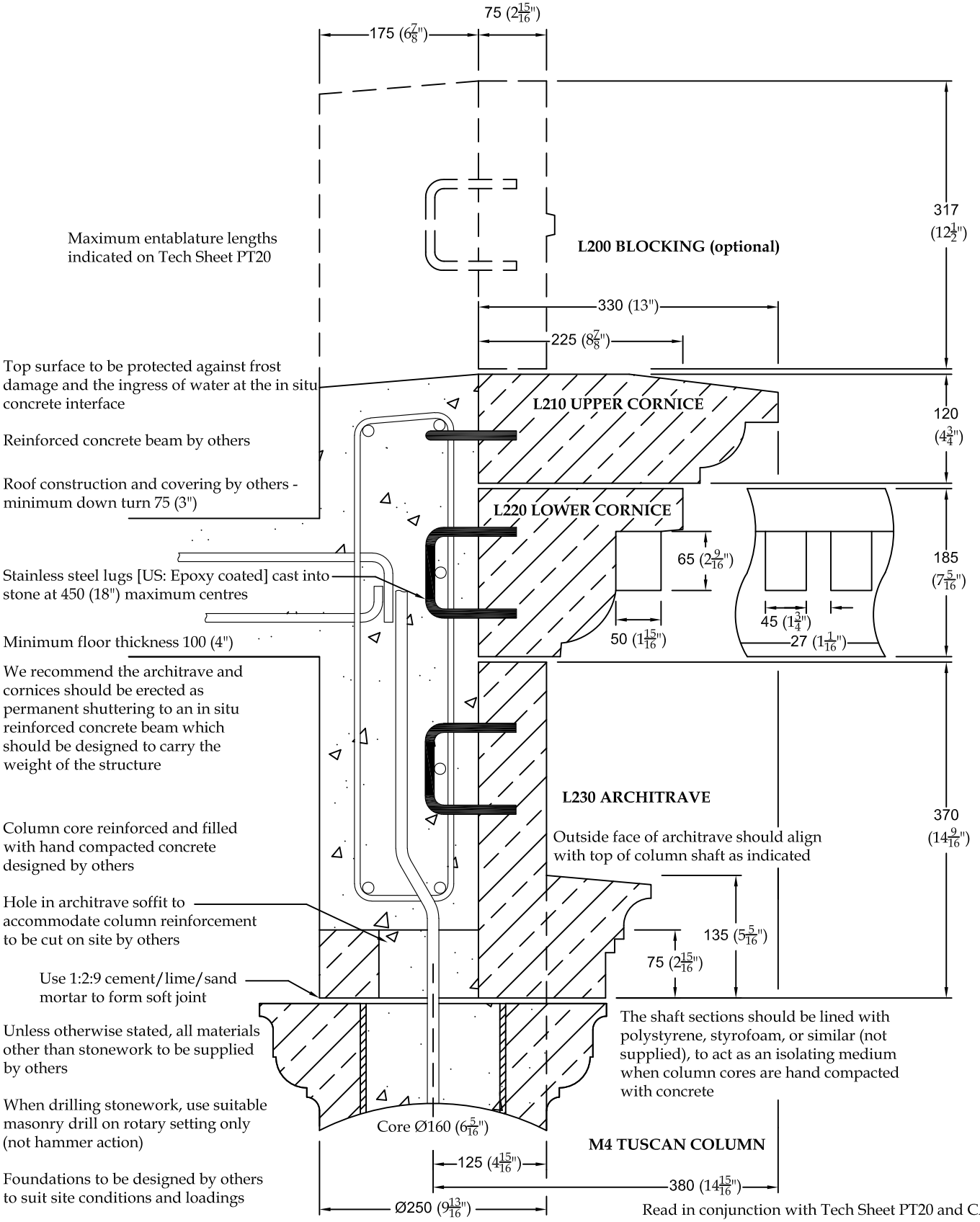
# PORTICO B DETAIL




Maximum entablature lengths indicated on Tech Sheet PT20

Top surface to be protected against frost damage and the ingress of water at the in situ concrete interface

Reinforced concrete beam by others

Roof construction and covering by others - minimum down turn 75 (3")

Stainless steel lugs [US: Epoxy coated] cast into stone at 450 (18") maximum centres

Minimum floor thickness 100 (4")

We recommend the architrave and cornices should be erected as permanent shuttering to an in situ reinforced concrete beam which should be designed to carry the weight of the structure

Column core reinforced and filled with hand compacted concrete designed by others

Hole in architrave soffit to accommodate column reinforcement to be cut on site by others

Use 1:2:9 cement/lime/sand mortar to form soft joint

Unless otherwise stated, all materials other than stonework to be supplied by others

When drilling stonework, use suitable masonry drill on rotary setting only (not hammer action)

Foundations to be designed by others to suit site conditions and loadings

Outside face of architrave should align with top of column shaft as indicated

The shaft sections should be lined with polystyrene, styrofoam, or similar (not supplied), to act as an isolating medium when column cores are hand compacted with concrete

Read in conjunction with Tech Sheet PT20 and CAD1

All dimensions exclude joints - allow 6mm (1/4") for vertical and bedding joints

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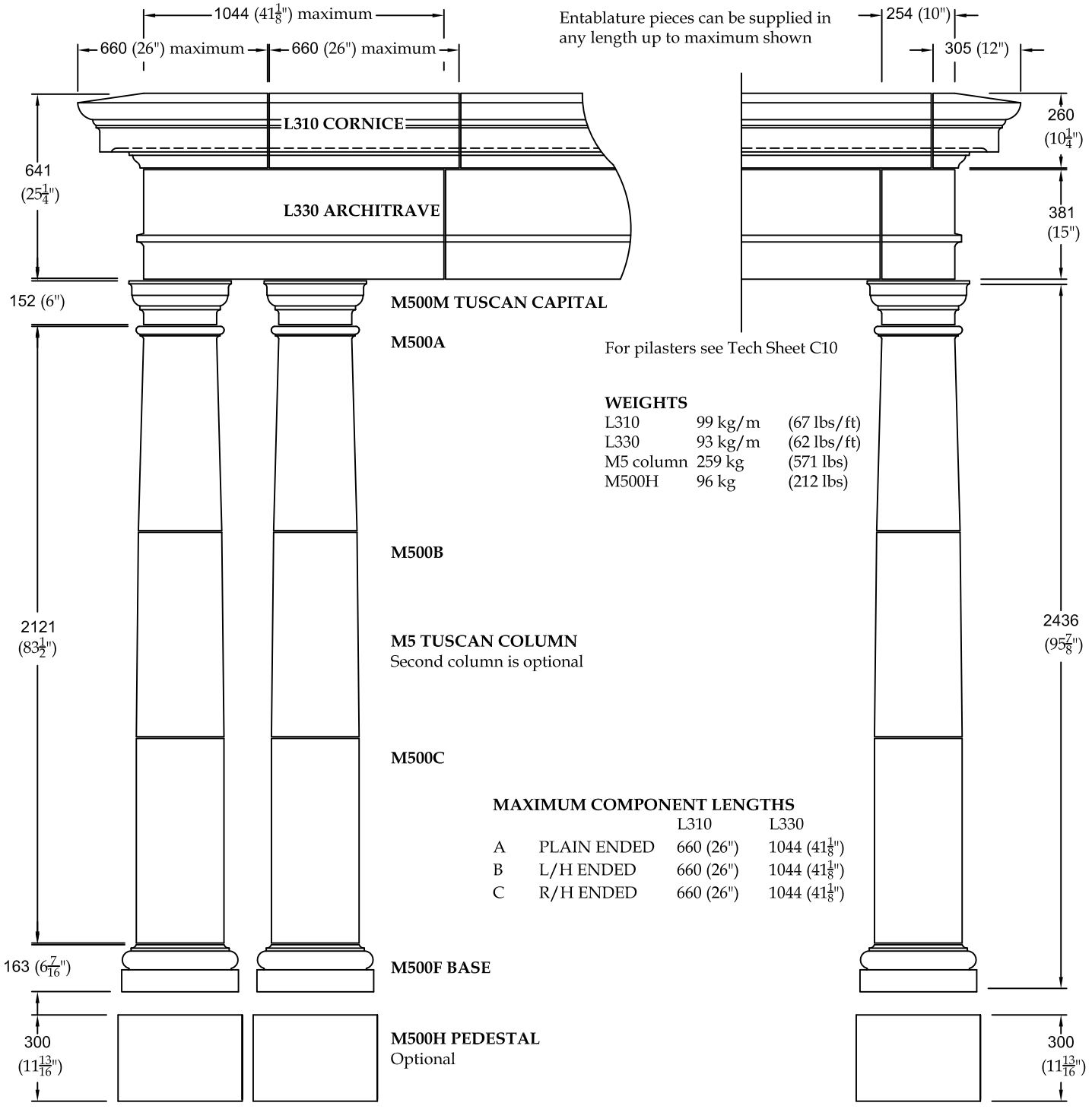
# PORTICO C

Return entablature components are available for 90° external corners

Entablature pieces can be supplied in any length up to maximum shown




For pilasters see Tech Sheet C10

**WEIGHTS**

| | | |
|---|---|---|
| L310 | 99 kg/m | (67 lbs/ft) |
| L330 | 93 kg/m | (62 lbs/ft) |
| M5 column | 259 kg | (571 lbs) |
| M500H | 96 kg | (212 lbs) |

**MAXIMUM COMPONENT LENGTHS**

| | | L310 | L330 |
|---|---|---|---|
| A | PLAIN ENDED | 660 (26") | 1044 (41⅛") |
| B | L/H ENDED | 660 (26") | 1044 (41⅛") |
| C | R/H ENDED | 660 (26") | 1044 (41⅛") |

**FRONT ELEVATION**
Left hand

**SIDE ELEVATION**

Read in conjunction with Tech Sheet PT31 and CAD1
All weights are approximate and should be used as a guideline only
All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

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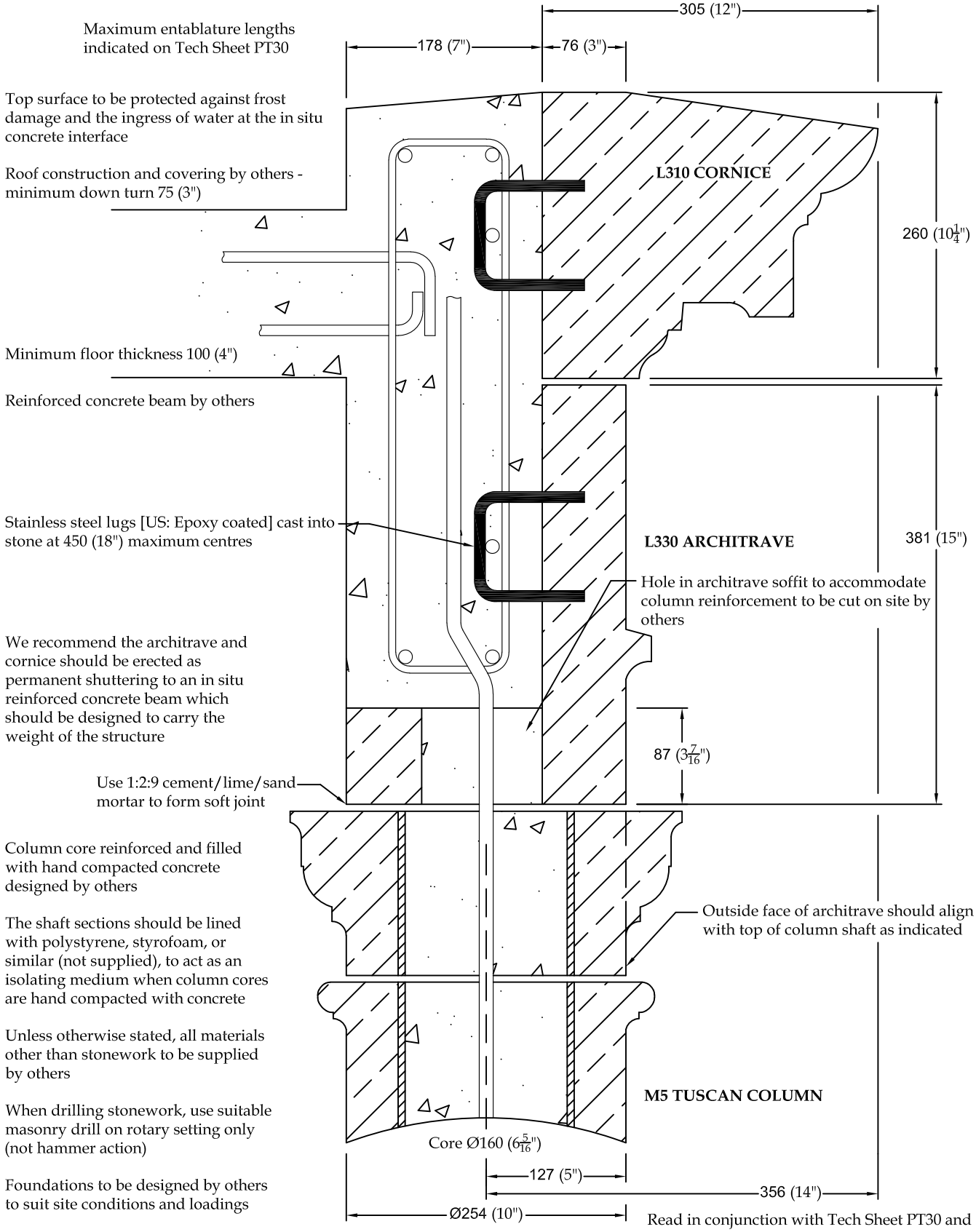
# PORTICO C DETAIL




Maximum entablature lengths indicated on Tech Sheet PT30

Top surface to be protected against frost damage and the ingress of water at the in situ concrete interface

Roof construction and covering by others - minimum down turn 75 (3")

Minimum floor thickness 100 (4")

Reinforced concrete beam by others

Stainless steel lugs [US: Epoxy coated] cast into stone at 450 (18") maximum centres

Hole in architrave soffit to accommodate column reinforcement to be cut on site by others

We recommend the architrave and cornice should be erected as permanent shuttering to an in situ reinforced concrete beam which should be designed to carry the weight of the structure

Use 1:2:9 cement/lime/sand mortar to form soft joint

Column core reinforced and filled with hand compacted concrete designed by others

The shaft sections should be lined with polystyrene, styrofoam, or similar (not supplied), to act as an isolating medium when column cores are hand compacted with concrete

Outside face of architrave should align with top of column shaft as indicated

Unless otherwise stated, all materials other than stonework to be supplied by others

When drilling stonework, use suitable masonry drill on rotary setting only (not hammer action)

Foundations to be designed by others to suit site conditions and loadings

Read in conjunction with Tech Sheet PT30 and CAD1

All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints



Do not scale

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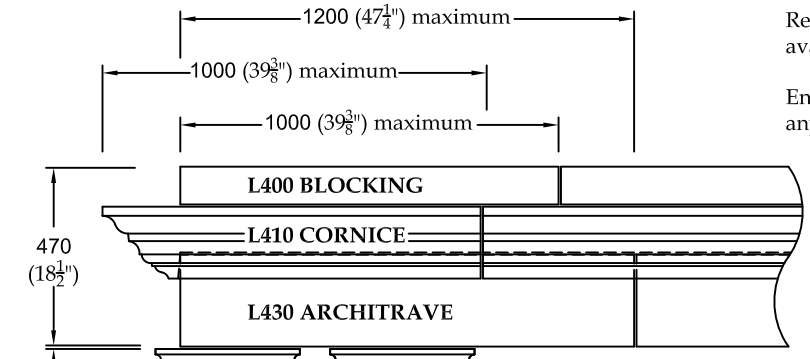
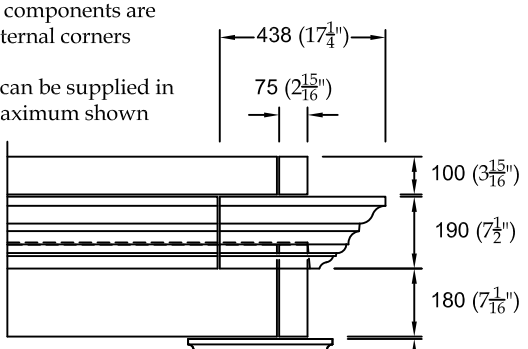
# PORTICO D




Return entablature components are available for 90° external corners

Entablature pieces can be supplied in any length up to maximum shown




**M400M TUSCAN CAPITAL**

For pilasters see Tech Sheet C10

**M400A**

**WEIGHTS**

| | | |
|---|---|---|
| L400 | 15 kg/m | (10 lbs/ft) |
| L410 | 93 kg/m | (62 lbs/ft) |
| L430 | 37 kg/m | (25 lbs/ft) |
| M4 column | 280 kg | (617 lbs) |
| M400H | 85 kg | (187 lbs) |

**M400B**

**M4 TUSCAN COLUMN**
Second column is optional

2388 (94")

2728 (107⅜")

**M400C**

**MAXIMUM COMPONENT LENGTHS**

| | | L400 | L410 | L430 |
|---|---|---|---|---|
| A | PLAIN ENDED | 1000 (39⅜") | 1000 (39⅜") | 1200 (47¼") |
| B | L/H ENDED | - | 1000 (39⅜") | - |
| C | R/H ENDED | - | 1000 (39⅜") | - |

**M400F BASE**

190 (7½")

**M400H PEDESTAL**
Optional

300 (11 13/16")

300 (11 13/16")

400 (15¾")

424 (16 11/16")

**FRONT ELEVATION**
Left hand

**SIDE ELEVATION**

Read in conjunction with Tech Sheet PT41 and CAD1
All weights are approximate and should be used as a guideline only
All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

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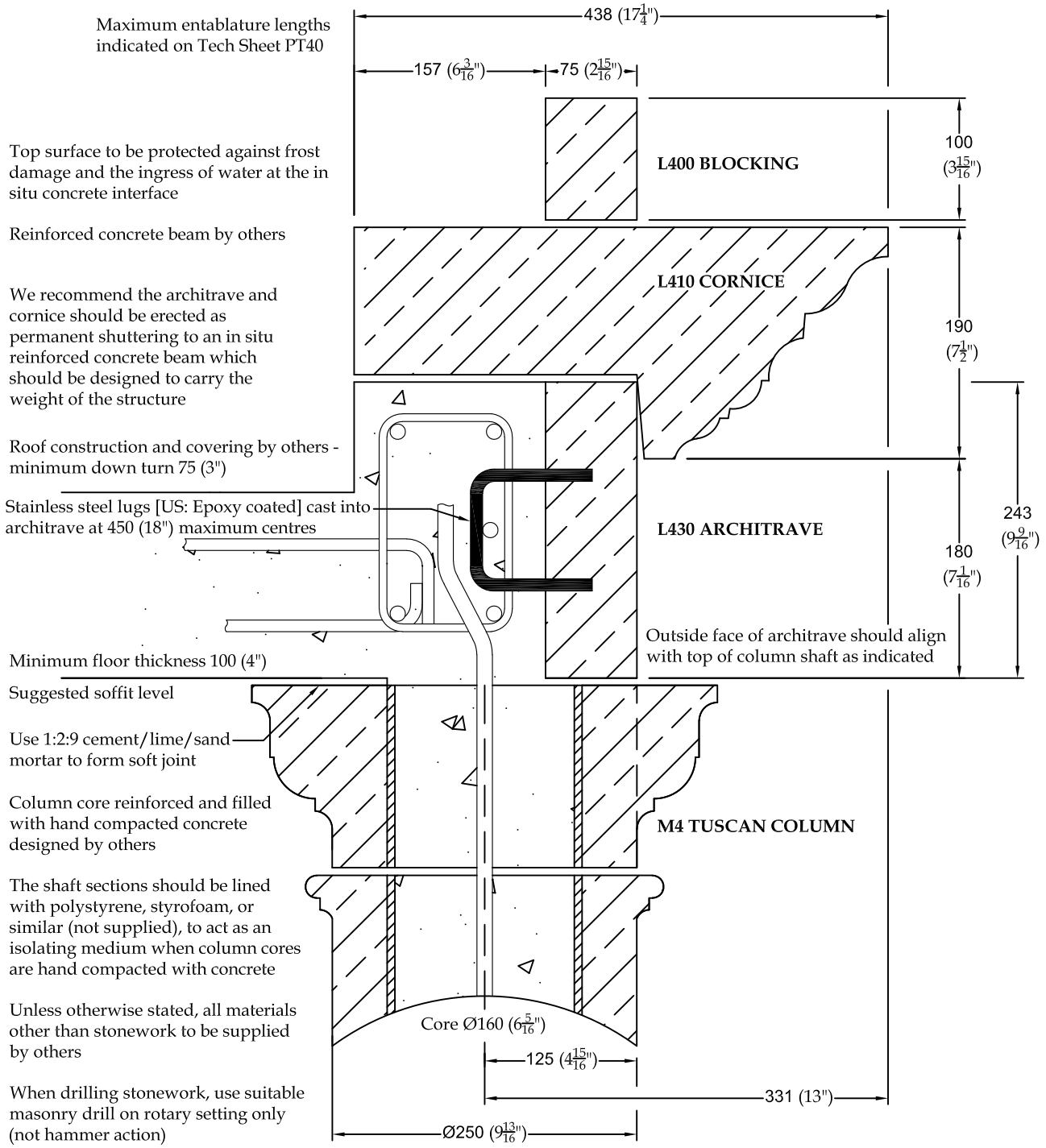
# PORTICO D DETAIL




Read in conjunction with Tech Sheet PT40 and CAD1

All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

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# PORTICO E

**MAXIMUM COMPONENT LENGTHS**

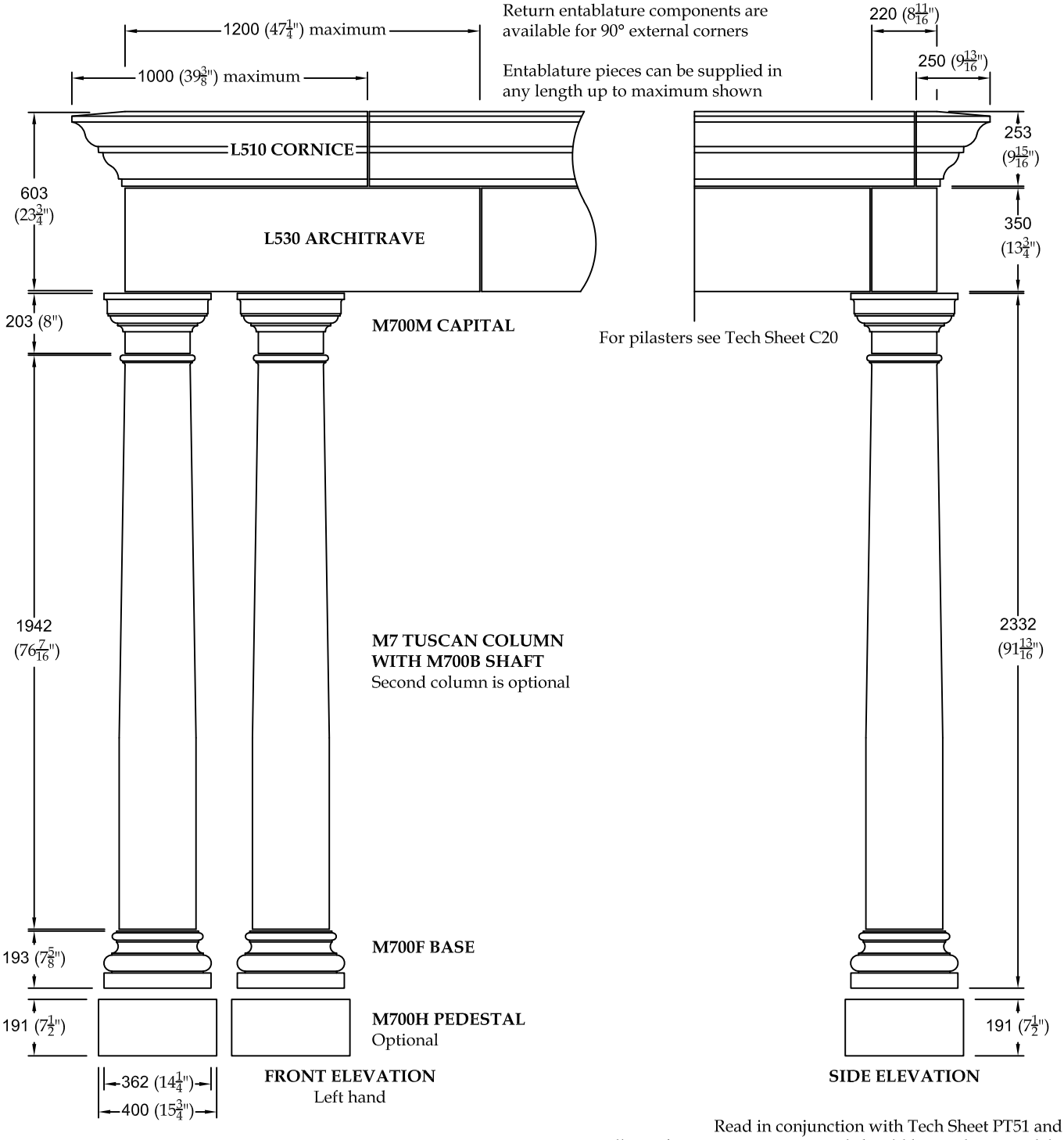
| | | L510 | L530 |
|---|---|---|---|
| A | PLAIN ENDED | 1000 ($39\frac{3}{8}$") | 1200 ($47\frac{1}{4}$") |
| B | L/H ENDED | 1000 ($39\frac{3}{8}$") | 1200 ($47\frac{1}{4}$") |
| C | R/H ENDED | 1000 ($39\frac{3}{8}$") | 1200 ($47\frac{1}{4}$") |

**WEIGHTS**

| | | |
|---|---|---|
| L510 | 75 kg/m | (50 lbs/ft) |
| L530 | 74 kg/m | (50 lbs/ft) |
| M7 with M700B shaft | 206 kg | (454 lbs) |
| M700H | 52 kg | (115 lbs) |

Return entablature components are available for 90° external corners

Entablature pieces can be supplied in any length up to maximum shown




For pilasters see Tech Sheet C20

Read in conjunction with Tech Sheet PT51 and CAD1
All weights are approximate and should be used as a guideline only
All dimensions exclude joints - allow 6mm (¼") for vertical and bedding joints

 Do not scale 

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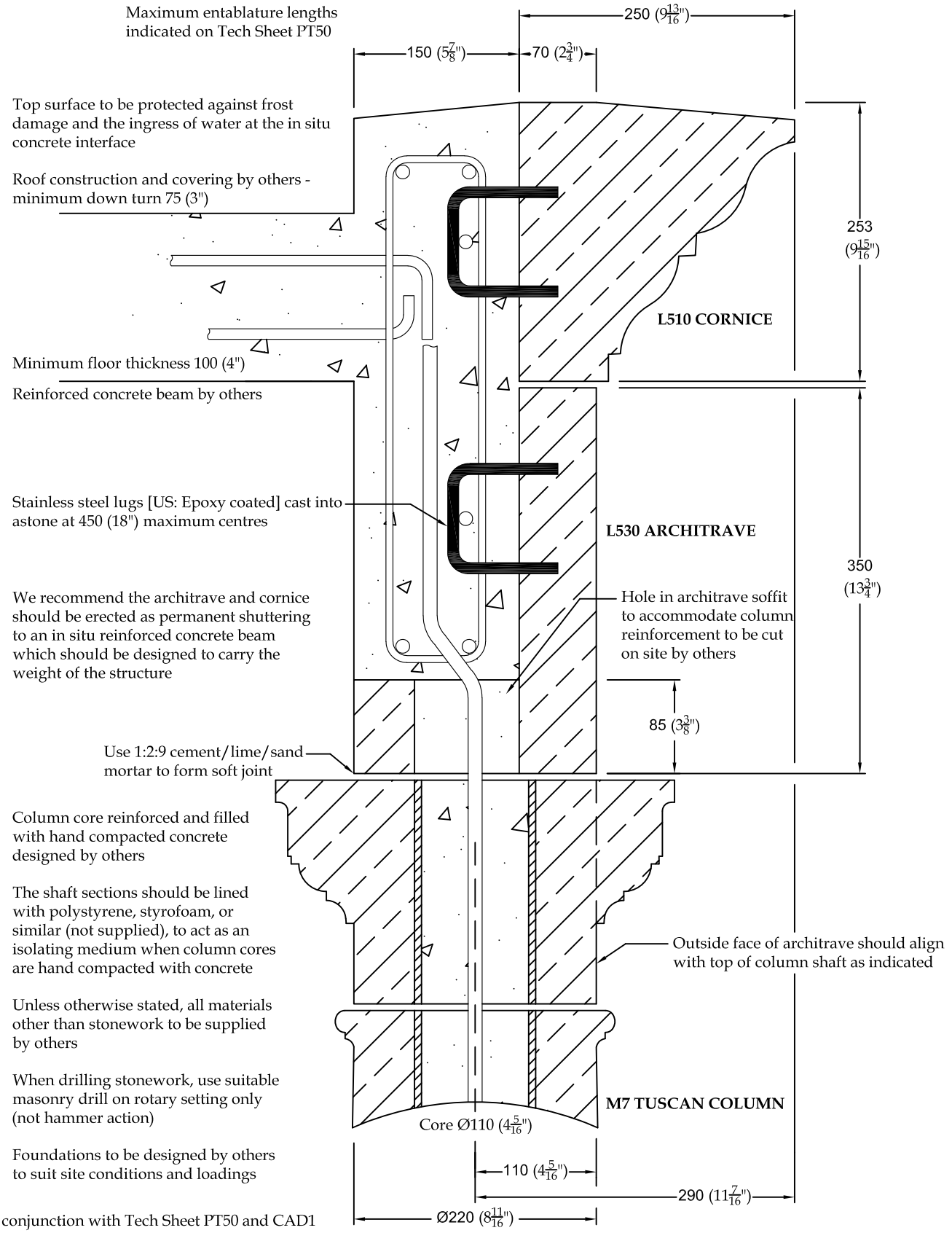
# PORTICO E DETAIL




Read in conjunction with Tech Sheet PT50 and CAD1

All dimensions exclude joints - allow 6mm (1/4") for vertical and bedding joints

# THE GIBBS RANGE

## · OF CLASSICAL PORCHES ·

HADDONSTONE

ADAM ARCHITECTURE

**Andrew Smith - Senior Buyer C G Fry & Son Ltd.**

HADDONSTONE is a well-known reputable company and C G Fry & Son, award-winning house builder, has used their cast stone architectural detailing at a number of our South West developments over the last ten years. We erected the GIBBS Classical Porch at Tregunnel Hill in Newquay and use HADDONSTONE because of the consistency, product, price and service.

**Calder Loth, Senior Architectural Historian,**
**Virginia Department of Historic Resources, USA**

As an advocate of architectural literacy, it is gratifying to have Haddonstone's informative brochure defining the basic components of literate classical porches. Hugh Petter's cogent illustrations and analysis of the porches' proportional systems make a complex subject easily grasped. A porch celebrates an entrance; it should be well mannered. James Gibbs's versions of the classical orders are the appropriate choice. They are subtlety beautiful, quintessentially English, and fitting for America.

**Jeremy Musson, English author, editor and presenter**

Haddonstone's new Gibbs range is the result of an imaginative collaboration with architect Hugh Petter and draws on the elegant models provided by James Gibbs, one of the most enterprising design heroes of the Georgian age. The result is a series of Doric and Ionic porches with a subtle variety of treatments which can be carefully adapted to bring elegance and dignity to houses old and new.

# Introduction

The GIBBS Range of Classical Porches is designed by Hugh Petter, Director of ADAM Architecture and inspired by the Georgian architect James Gibbs (1682-1754). The porches are manufactured by HADDONSTONE, one of the world's leading cast stone manufacturers with facilities in the UK and USA.

Gibbs' Classical architecture design handbooks were probably the most widely used in the eighteenth century across the Western world. It is this rich legacy that makes Gibbs' version of the Classical Orders the most appropriate for this new range of porch designs, being equally suitable for both new and historic buildings across the UK, USA and around the world.

The GIBBS Range is conceived around the two oldest and most widely used Orders - the Doric and Ionic. Over the centuries, generations of Classical architects have adapted the proportions of these two Orders to suit a variety of situations.

A unique matrix of interchangeable components has been devised to offer architects, designers, builders and homeowners the opportunity to build elegant architectural porches for any situation; that use the rules, geometry and proportion of Classical architecture; and at an affordable price.

The GIBBS Range includes both elaborate and more restrained details so that the character of the porch can be finely tuned to each home.



*A Doric porch from the GIBBS Range enhances a private residence in Northamptonshire (please note: shown with base blocks)*

*A Doric porch from the GIBBS Range on a new house in Tregunnel Hill, Newquay, commissioned by the Duchy of Cornwall*

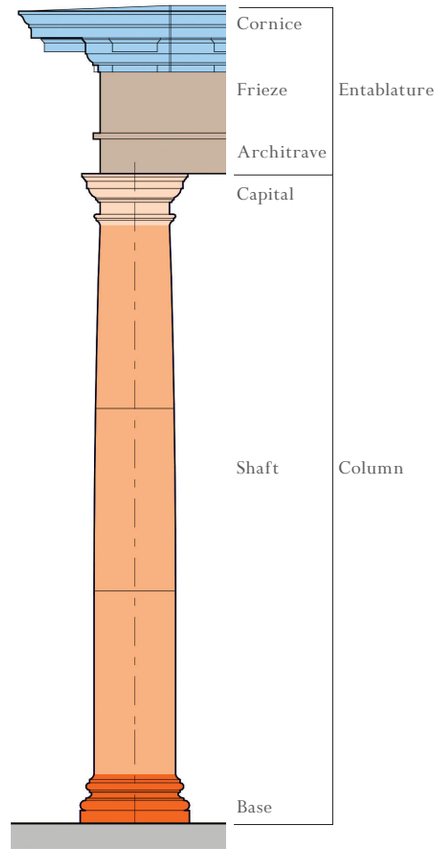
## Rooted in Tradition

The GIBBS Range of Classical Porches offers a matrix of component parts in cast stone that can be assembled in ten different ways to produce porches with a Doric or Ionic Order (see pages 6 and 7). The GIBBS Range draws upon three Roman Orders of architecture: Tuscan, Doric, and Ionic, synthesized for the Range as Doric and Ionic.

The Tuscan is the first of the five Orders of Roman architecture and the simplest. Its base is plain and supports an unfluted shaft with a very simple capital. In essence it is a rustic form of the Doric Order.

The Doric Order is more elaborate. Its decorative expression is thought to originate from the earliest timber temples with a frieze divided into triglyphs and metopes, and a cornice with flat projecting blocks (mutules) on its underside. Originally, the Doric Order had a baseless fluted shaft, but later Roman and Renaissance versions had unfluted shafts and moulded bases.

The Ionic Order has a capital with distinctive scroll-like forms. Its column shaft is proportionally longer than those of the Tuscan and Doric Orders. The entablature consists of an architrave, frieze (plain, decorated or sometimes omitted) and a cornice with richly decorated bed-moulding dentils.




Over the centuries, Classical architects have adapted the proportions and details of these Orders to suit a great number of situations. The GIBBS Range of Classical Porches follows in this tradition, offering correctly proportioned designs, in a controlled variety of combinations. It includes both simplified and more elaborate details so that the final design can be tailored to suit its location. Interchangeable elements offer variants of height, depth, and levels of architectural detail.

## Some Examples from the Range

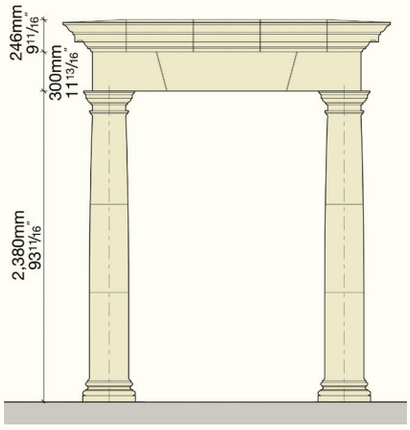
*GIBBS I – Doric porch with Box Cornice, Plain Architrave and Frieze*

*GIBBS II – Doric porch with Mutule Cornice, Architrave and Triglyph Frieze*

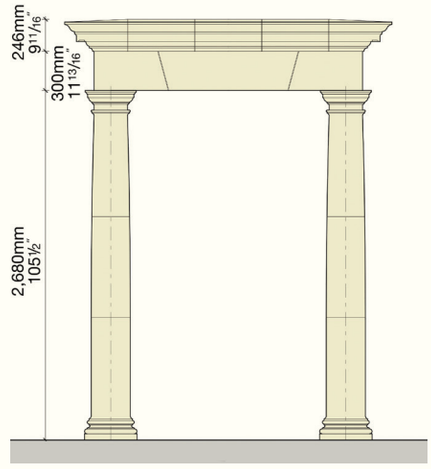
*GIBBS III – Doric porch with Dentil Cornice, Architrave and Stepped Frieze*

*GIBBS V – A Doric porch with Mutule Cornice, Large Plain Architrave and Frieze*

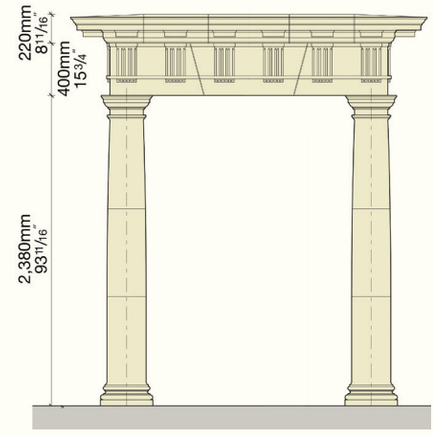
# THE COMPLETE RANGE



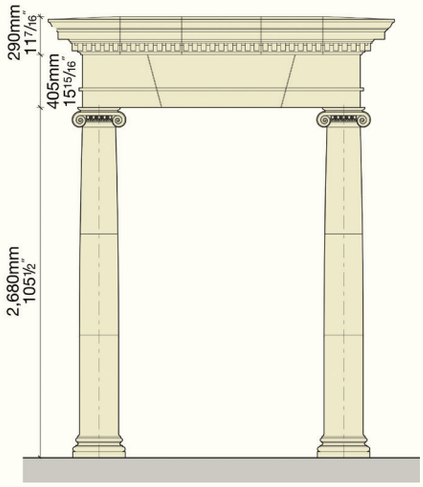

*GIBBS I: 1:8 Doric porch with Box Cornice, Plain Architrave and Frieze*



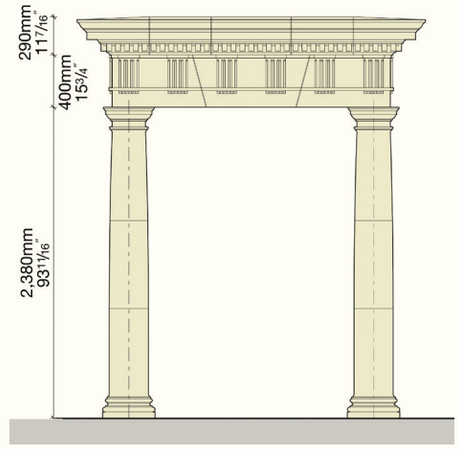

*GIBBS I: 1:9 Doric porch with Box Cornice, Plain Architrave and Frieze*



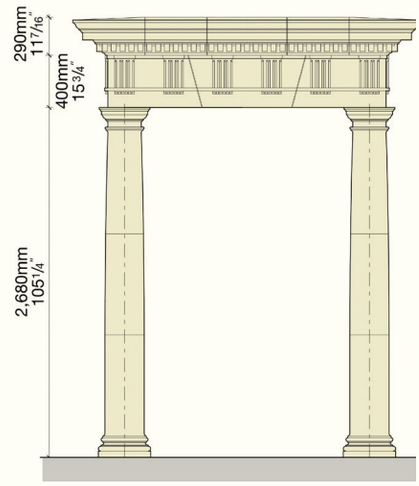

*GIBBS II: 1:8 Doric porch with Mutule Cornice, Architrave and Triglyph Frieze*



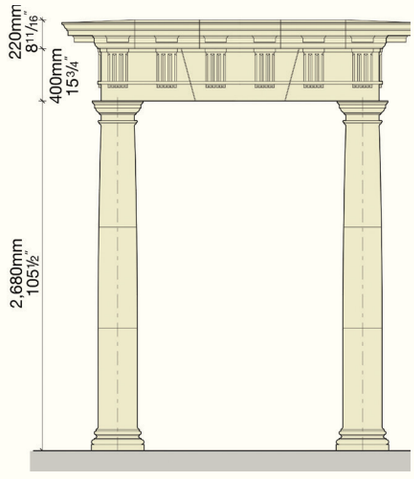

*GIBBS III: 1:9 Ionic porch with Dentil Cornice, Architrave and Stepped Frieze*



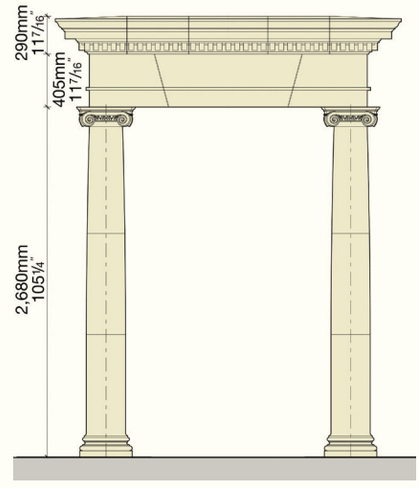

*GIBBS IV: 1:8 Doric porch with Dentil Cornice, Architrave and Triglyph Frieze*



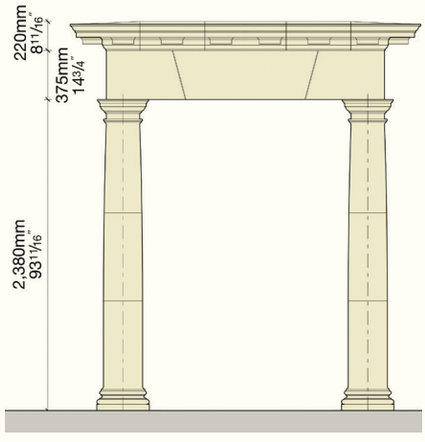

*GIBBS IV: 1:9 Doric porch with Dentil Cornice, Architrave and Triglyph Frieze*



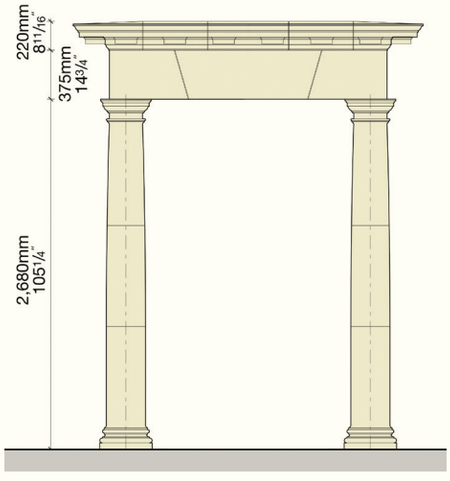

*GIBBS II: 1:9 Doric porch with Mutule Cornice, Architrave and Triglyph Frieze*




*GIBBS III: 1:9 Angular Ionic porch with Dentil Cornice, Architrave and Stepped Frieze*




*GIBBS V: 1:8 Doric porch with Mutule Cornice, Large Plain Architrave and Frieze*




*GIBBS V: 1:9 Doric porch with Mutule Cornice, Large Plain Architrave and Frieze*

A matrix of nineteen component parts in cast stone that can be assembled in ten different ways to produce porches in a Doric or Ionic Order. All dimensions exclude joints.

Technical Specification Sheets and CAD details are available on request.

# The Component Parts

The component parts of the GIBBS Range are described here and can be assembled to create 10 different porches in a Doric or Ionic Order, as show on pages 6 and 7.

ENTABLATURE. Generic name for the beam that sits above the column that usually includes the Cornice, Architrave and Frieze. The GIBBS Range of Classical Porches offer four Entablature options: Triglyph and Stepped, and two simpler options - Plain, Large Plain.

CORNICE. The uppermost division of an Entablature, a crowning projecting ornamental top. There are three Cornice options: Dentil, Mutule and Box.

FRIEZE. Horizontal central band of an Entablature below the Cornice and over the Architrave. In the GIBBS Range the Frieze is incorporated into the Architrave. In the Doric, it is often broken up into Metopes and Triglyphs, and in the simpler Doric Order (or Tuscan), it is plain or merges with the Architrave as one element. In the Ionic Order it is plain, enriched or sometimes omitted altogether.

METOPE. Square plain or enriched panel between Triglyphs in the Doric Order.

TRIGLYPH. Upright blocks in a Doric Frieze flanking Metopes and suggesting the ends of timber beams. Each Triglyph has vertical V shaped channels cut in it and the edges are chamfered with half Vs, hence three Vs in all.

ARCHITRAVE. Formalised beam or lintel, the lowest of the three main parts of an Entablature. It is often divided into three horizontal bands called Fasciae. In the GIBBS Range the Frieze is incorporated into the Architrave.

COLUMN. Consists of a Capital, Shaft and Base.

CAPITAL. Topmost part of a Column, or Pilaster available in three styles: the Doric, the Ionic and the Angular Ionic.

The Doric Capital features a plain band or Neck and supports a square block or Abacus on which the Entablature sits.

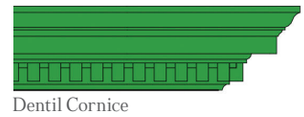
The Ionic Capital has characteristic scrolls called Volutes and other mouldings, and resembles a cushion rolled up at each end.

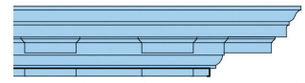
The Angular Ionic Capital is a type of Ionic Capital with four identical faces, allowing the scroll-like volutes to be seen in the round.

SHAFT. The body of the Column between the Capital and the Base, the top two thirds of which diminish in diameter in a gentle curve called Entasis. It sits directly on top of the Base. All proportions of a classical column are based upon the module of the base diameter of the shaft. It has a standard smooth, plain finish. The Shaft comes in two heights, based upon 1:8 and 1:9 proportions.

BASE. The lowest part of a Column between the bottom of the Shaft and the Pavement or Pedestal. It is a generic part of the range for all design configurations and, depending on the local situation, can be placed on a bespoke cast stone pedestal or on an unadorned block.

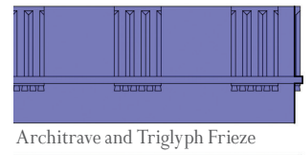
PILASTER. A Column engaged with a wall with options for both the Doric and Ionic Order.

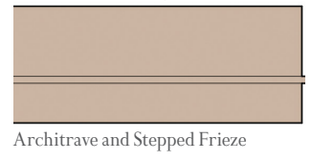

Dentil Cornice


Mutule Cornice (recommended for Doric)


Box Cornice (recommended for Tuscan/Doric)

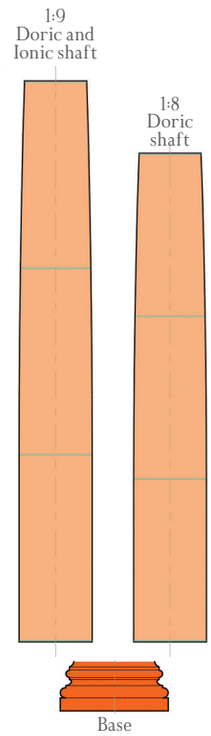

Large Plain Architrave and Frieze


Architrave and Triglyph Frieze


Architrave and Stepped Frieze


Plain Architrave and Frieze


Doric Capital | Ionic Capital | Angular Ionic Capital



## About ADAM Architecture

ADAM Architecture is one of the leading practitioners of traditional and progressive architecture and contextual urbanism in Europe. The practice has offices in Winchester and London and is run by six directors; Robert Adam, Nigel Anderson, Paul Hanvey, Robbie Kerr, Hugh Petter and George Saumarez Smith. The team of around 80 staff across both offices are highly skilled and experienced architects, technologists, urban designers, an historical researcher, project managers, and administrative support staff.

ADAM Architecture's portfolio of projects, across the UK and overseas, include: new town and country houses; conversions; renovations and extensions, largely for private owners; historic buildings, such as monuments, protected and listed buildings; commercial and institutional buildings, such as hotel, healthcare and office buildings; residential developments; masterplans, and new urban designs; ranging in size from small village extensions to major new developments.

## About HADDONSTONE

HADDONSTONE is one of the world's leading cast stone manufacturers, with state-of-the-art facilities in both the UK and USA employing over 200 staff from skilled mould makers and production operatives to experienced contracts estimators and CAD technicians. The company is renowned for high specification ornamental and architectural designs in traditional, classical and contemporary styles - from balustrades and porticos to landscape ornaments and fireplaces.

HADDONSTONE works with leading architects, designers and museums around the world. HADDONSTONE has worked closely with Hugh Petter to ensure that this new range of Classical details is designed and manufactured to the highest quality, with close attention to every detail. There is a package of typical technical information to help contractors erect the porch correctly and to a high standard. The material is regularly tested to ensure it exceeds the requirements of all relevant UK and international standards.








# About the Architects

## JAMES GIBBS (1682-1754)

James Gibbs studied for the priesthood in Rome before he turned to architecture in 1704. He became a pupil of Carlo Fontana before returning to London where, with help from Sir Christopher Wren, he became one of the two surveyors to the Commission for Building 50 New Churches in London in 1713. His masterly design of St Mary Le Strand in London (1714-24) launched his reputation; St Martins in the Fields in Trafalgar Square (1722-26) became the prototype for urban Anglican churches for the next century across the UK and America. Other ecclesiastical projects included: Derby Cathedral (1723-5); the Mausoleum at Kirkleatham Church, Yorks (1740); and St Nicholas Church West, Aberdeen (1741-55). His prolific portfolio of secular buildings included: Sudbrooke House, Petersham (c1717-20); the Senate House, Cambridge (1722-30); the Fellows Building, Kings College Cambridge (1724-29); and the Radcliffe Library, Oxford (1737-48).

## HUGH PETTER RIBA FRSA

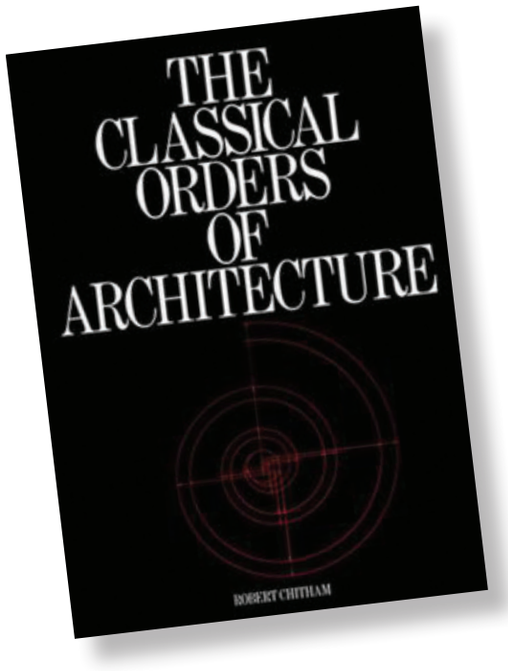
After winning the Rome Scholarship in architecture twice, Hugh Petter served for 6 years as Senior Tutor at The Prince of Wales Institute in London before embarking upon his career in professional practice with ADAM Architecture.

He is Vice Chairman of the Georgian Group in London; a Member of the Council of Advisors of The Institute of Classical Architecture in New York, Trustee of the Prince's Foundation for Building Community and is the external examiner in Conservation at The College of Estate Management in Reading. Petter enjoys an international portfolio of projects that includes: bespoke new buildings; work to historic buildings; commercial housing; and urban design. He writes regularly, and lectures across the UK and overseas.

# Evolution of the Orders

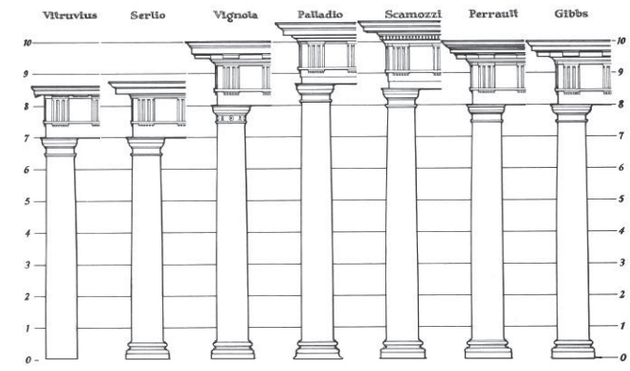
Each of the Classical Roman Orders (Tuscan, Doric, Ionic, Corinthian, and Composite) is composed from a series of components that are arranged in clear, though not immutable, proportional relationships with each other, and particular to that Order. Like a language, the Orders are capable of development, but retain their individual identity throughout the centuries of their development.

James Gibbs was the most influential architect practising in Britain in the early eighteenth century.




His books, *The Rules for Drawing the Several Parts of Architecture*, and *Book of Architecture* contain numerous plates which offer the clearest, most elegant and simple geometric methods for setting out each Order, together with profuse examples of Gibbs's own designs showing how his version of the Orders could be woven into beautiful classical buildings. His method of setting out the Orders could readily be followed by non-professional, student, architect and craftsman alike.

Robert Chitham's book, *The Classical Orders of Architecture*, published in 1985, provided a new manual for drawing the Orders and mastering the essentials of the Classical language. He set

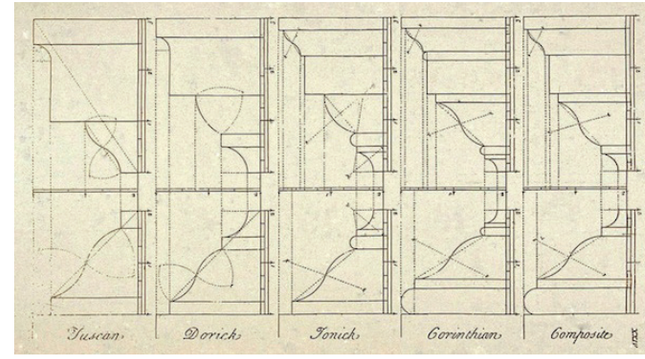



*The Classical Orders by Robert Chitham*

out to build on Gibbs's work, set in the context of versions of the Orders by Marcus Vitruvius Pollio (fl. late C1BC), Sebastian Serlio (1475-1554), Giacomo da Vignola (1507-73), Andrea Palladio (1508-80), Vincenzo Scamozzi (1552-1616), Claude Perrault (1613-88). James Gibbs (1682-1754), and William Chambers (1723-96), were included for their particular impact on English Architecture. Chitham's method was based on a decimal-based module which could be readily applied to metric dimensions.

Later, a second edition of Chitham's work also included a method for drawing the Orders to a twelve-base division, making his book applicable for designers working with imperial dimensions.

It is this foundation that Hugh Petter has developed, calculated, and drawn for The GIBBS Range of Classical Porches in conjunction with HADDONSTONE.




*Drawing from "Rules For Drawing The Seven Parts Of Architecture" by James Gibbs 1753*

Article by Professor James Stevens Curl

# The GIBBS Range in an Historic Context

Architecture is a public art, on show for everyone who can hardly avoid being affected by it. A commendable aim to create beautiful new Classical designs is all too often frustrated by a lack of understanding of the underlying principles of the Classical language of architecture, but, in order to use a language effectively, dictionaries and rules are essential. One of the most satisfying periods, architecturally, was the Georgian (1714-1830), when architects, builders, and patrons, of however mediocre talent, could draw on those 'dictionaries' called 'pattern-books' which ensured design-guidance was available, so the Georgian street and square were composed of harmonious units, not shouting for 'originality', but conforming to certain details, elements, proportions, use of materials, and a coherent architectural language.

There is a long tradition in these islands involving the availability not only of architectural pattern-books providing sound guidance for the erection of literate Classical buildings, but of off-the-shelf building components, such as cast-iron balconies and railings, fanlights, artificial-stone elements (keystones, medallions, and architectural embellishments, for example those made in the workshops of Eleanor Coade (1733–1821), cornices, friezes, columns, sash-windows, and so on, all designed and made in accordance with a sophisticated system of design based on Classical principles. Many buildings erected during the Georgian period and thereafter, even well into the twentieth century, were pleasing and adhered to a Classical language of architecture. There were hugely important publications, such as *A Book of Architecture* (1728, 1739) and *Rules for Drawing the Several Parts of Architecture* (1732, 1736, 1738, 1753) both by James Gibbs (1682-1754), which had an enormous impact on both sides of the Atlantic, and the *Treatise on Civil Architecture* (1759, etc.), by Sir William Chambers (1723-96), which became a standard work dealing with the Classical Orders, architectural enrichments, and their uses, but these could only be afforded by persons of means, and therefore could not be responsible for the astonishing ranges of perfectly correct, decent, honest details that proliferated throughout the country at the time. Dissemination was largely possible through the cheaper manuals for artisans and craftsmen produced by entrepreneurs such as Batty Langley (1696-1751) and his brother, Thomas (1702-c.1751), although they drew heavily on other published sources (including Gibbs), and their importance as an influence on Georgian architecture cannot be overestimated.

In contrast, many off-the-shelf building components available today are uninformed by any scholarly acquaintance with Classical architecture, and indeed are clumsy travesties of the genuine article. Poorly proportioned, incompetently detailed, and crudely fashioned, they are not only exceptionally ugly, but could not be described as 'Classical' at all. It is because of this unsatisfactory state of affairs that The GIBBS Range has been designed by Hugh Petter, a leading authority on Classical architecture and a Director of ADAM Architecture, one of the largest firms of architects in the world that reinterprets the Classical language of architecture for twenty-first-century use. Developed in conjunction with HADDONSTONE, the foremost manufacturer of fine stonework designs in the world today, the Range provides architects, designers, builders, and homeowners with a choice of Classically literate cast-stone porches designed with a degree of flexibility in terms of simplicity or elaboration of detail, thus enabling the finished artefact to be tailored and adjusted to the scale and character of the building.

Georgian pattern-books successfully disseminated a coherent language of design, and a range of components, based on sound precedents, ensured a satisfactory standard of architecture was achieved. The GIBBS Range is a start to help attain something similar today, and is to be welcomed: one hopes it will be expanded to offer as wide a choice of decently designed components as was once available and helped to create civilised and agreeable surroundings that pleased the eye rather than offended it.

*Professor James Stevens Curl is a Member of the Royal Irish Academy, a Fellow of the Societies of Antiquaries of London and of Scotland, a Fellow of the Royal Incorporation of Architects in Scotland, and the author of many highly acclaimed books, including Victorian Architecture: Diversity & Invention (2007), Georgian Architecture: the British Isles 1714-1830 (2011), and (with Susan Wilson) The Oxford Dictionary of Architecture (2015).*

# Installation Guide

The GIBBS Range of Classical Porches are easy to install. The following step-by-step illustrations show a new porch being built to enhance an existing house in Northamptonshire.


*Haddonstone delivery on shrink wrapped pallets incorporating pallet manifesto to help identification.*


*A typical pallet showing architrave stonework featuring 'D' lugs to ease installation.*


*Concrete foundations installed to correct dimensions and specifications (designed by others).*


*Column pedestal and base bedded on 1:1:6 cement/lime/sand mortar. Starter bar already installed. (Refer to Column Assembly Recommendations for more information).*


*Bottom shaft section bedded on the base as previously described.*


*It is important to check levels throughout the installation process.*


*Polystyrene/Styrofoam (or similar) should be used to act as an isolating medium between the stone and infill concrete.*


*Spacers are used to ensure the correct joints.*


*Capital in place with starter bar protruding. Scaffolding must be used when working at higher levels.*


*Entablature in position showing 'D' lugs.*


*Exterior view of entablature showing supports, spacers and clamps.*


*Entablature with steel reinforcement and shuttering in place before concrete infill (designed by others).*


*Concrete infill underway.*

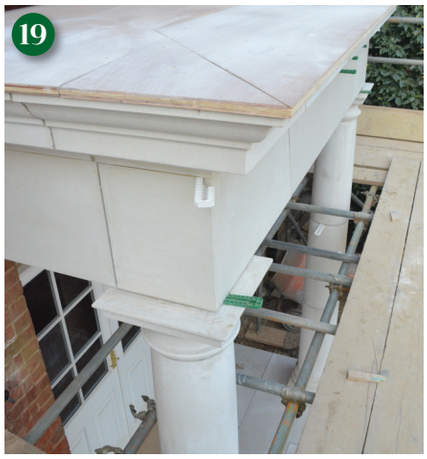

*Concrete infill of entablature complete.*


*Cornice stone installation underway.*


*Cornice stones being mechanically lifted into position.*


*Top view of cornice during installation.*


*Cornice stones in position with spacers shown.*




*Columns, architrave and cornice all installed. Flat roof in position prior to leading.*


*Pilaster base during installation. Note: wiring can be hidden behind these elements if required.*


*Pilaster shaft sections during installation.*


*Floor is installed at this point to reduce risk of damage taking place during construction. All cutting done on site.*


*Floor in position prior to pointing.*


*Internal view of roof structure and exposed concrete infill to architrave before finishing.*


*Lead roof installation to ensure waterproof structure.*


*The finished GIBBS Porch with all pointing completed. (Refer to Pointing Recommendations sheet for further details).*

GENERAL NOTE: Scaffolding must comply with Health & Safety Regulations. In these images some required scaffolding elements have been removed for photographic purposes.

For further information about
the GIBBS Range of Classical Porches please contact:

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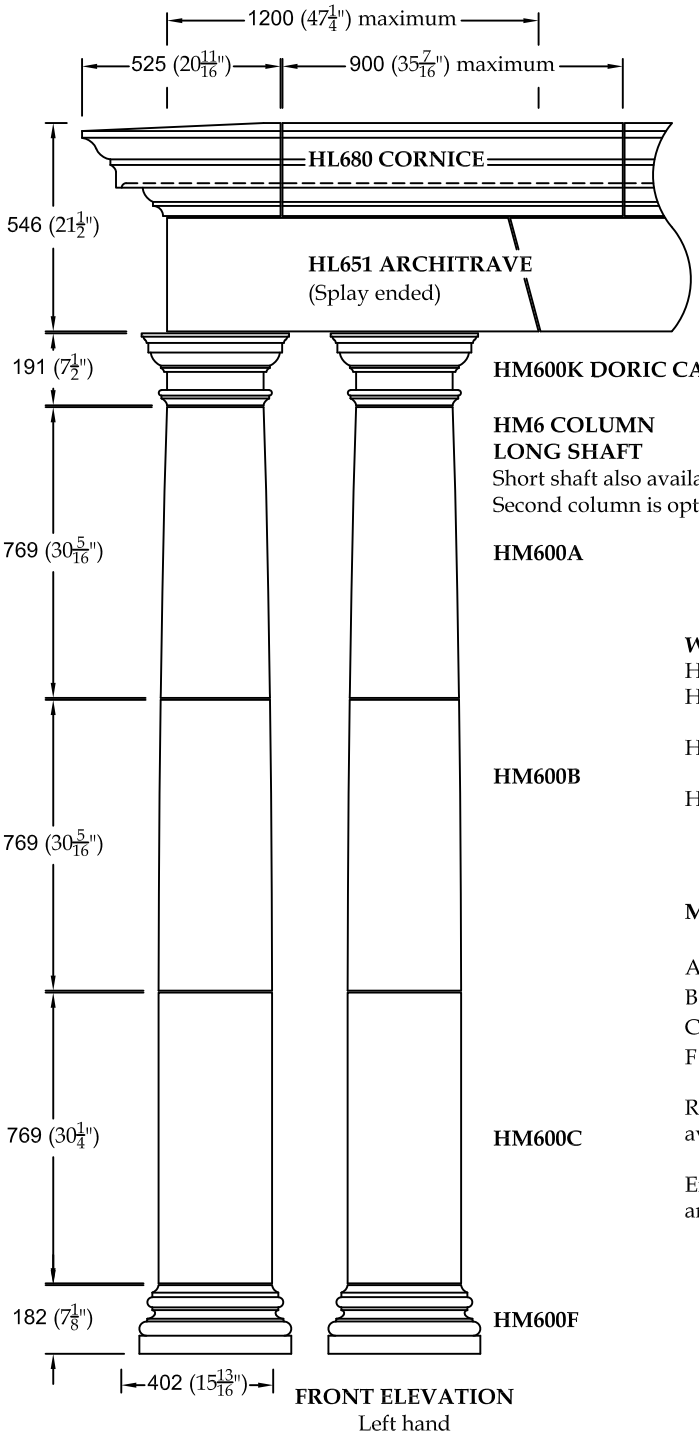
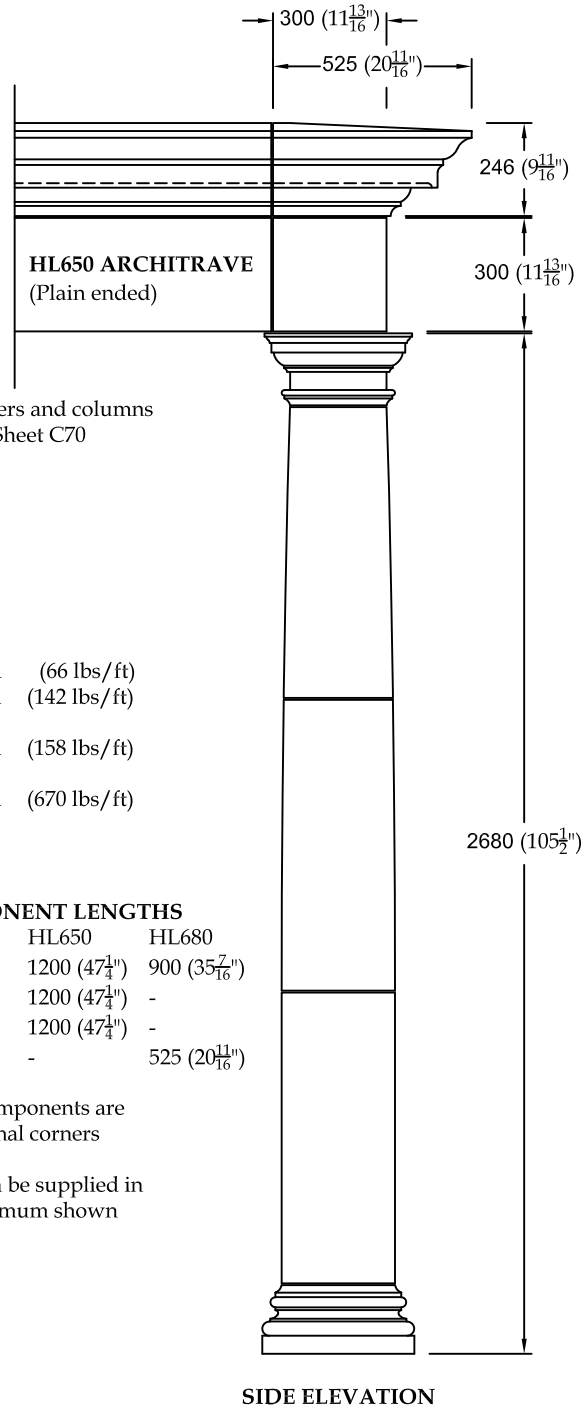
# GIBBS I (TECSTONE)

## GIBBS RANGE OF PORCHES




**FRONT ELEVATION**
Left hand




**SIDE ELEVATION**

For pilasters and columns
see Tech Sheet C70

**WEIGHTS**

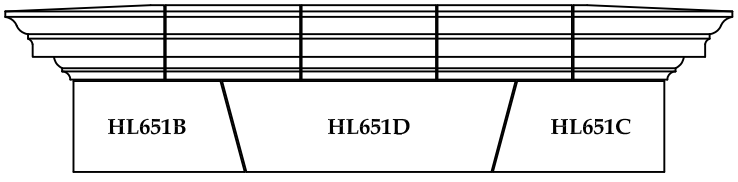
| | | |
|---|---|---|
| HL650/1L | 98 kg/m | (66 lbs/ft) |
| HL650/1S | 212 kg/m | (142 lbs/ft) |
| HL680 | 235 kg/m | (158 lbs/ft) |
| HM6 long | 304 kg/m | (670 lbs/ft) |

**MAXIMUM COMPONENT LENGTHS**

| | | HL650 | HL680 |
|---|---|---|---|
| A | PLAIN ENDED | 1200 (47¼") | 900 (35⁷⁄₁₆") |
| B | L/H ENDED | 1200 (47¼") | - |
| C | R/H ENDED | 1200 (47¼") | - |
| F | O/S CORNER | - | 525 (20¹¹⁄₁₆") |

Return entablature components are available for 90° external corners

Entablature pieces can be supplied in any length up to maximum shown




**ENTABLATURE ELEVATION**
**NOT TO SCALE**

Read in conjunction with Tech Sheet PT71, C70 and CAD1
All weights are approximate and should be used as a guideline only
All dimensions exclude joints - allow 5mm (3⁄16") for vertical and bedding joints

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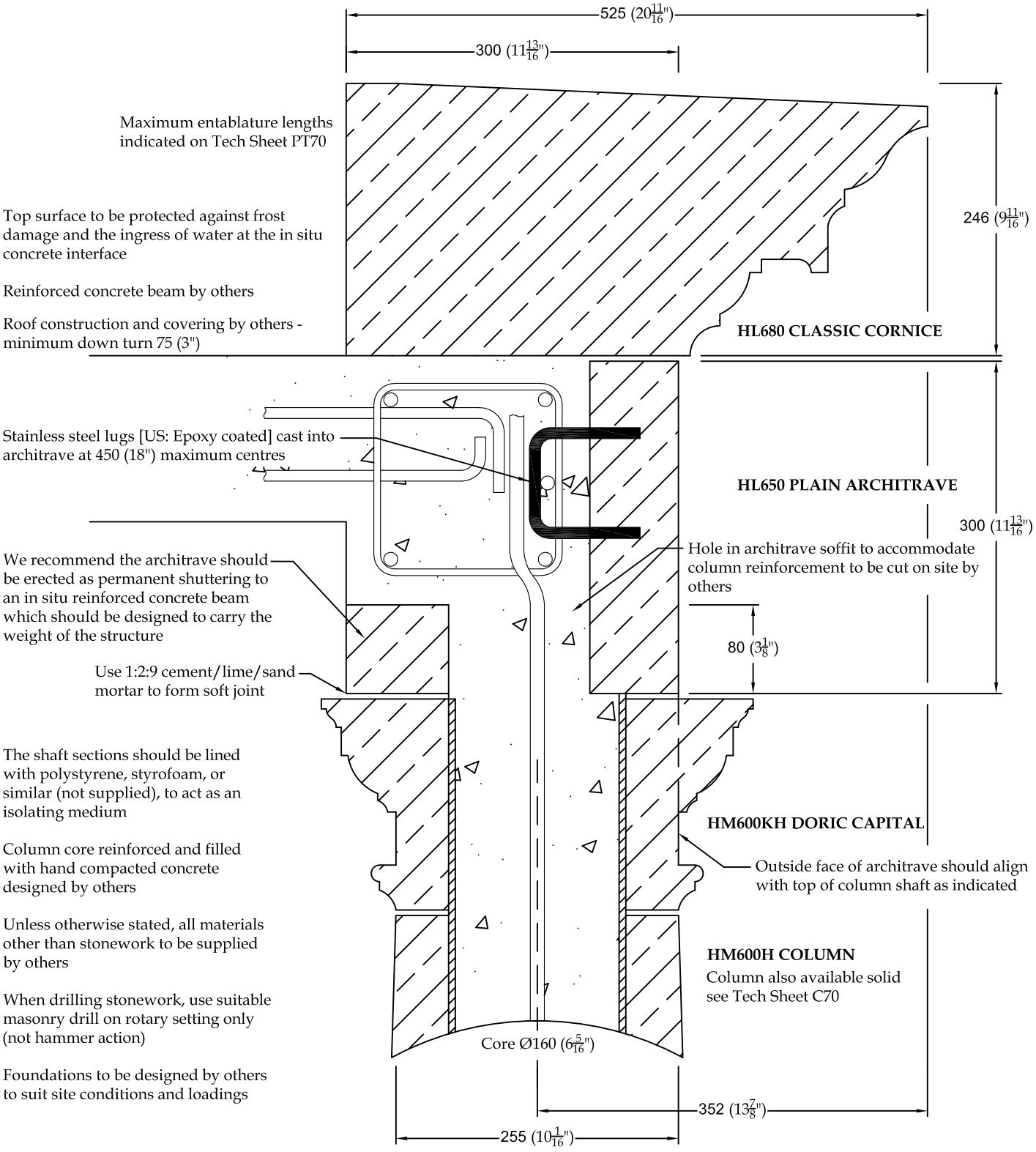
# GIBBS I (TECSTONE) DETAIL

## GIBBS RANGE OF PORCHES




Read in conjunction with Tech Sheet PT70, C70 and CAD1

All dimensions exclude joints - allow 5mm (3/16") for vertical and bedding joints

 Do not scale 

HADDONSTONE

ADAM ARCHITECTURE

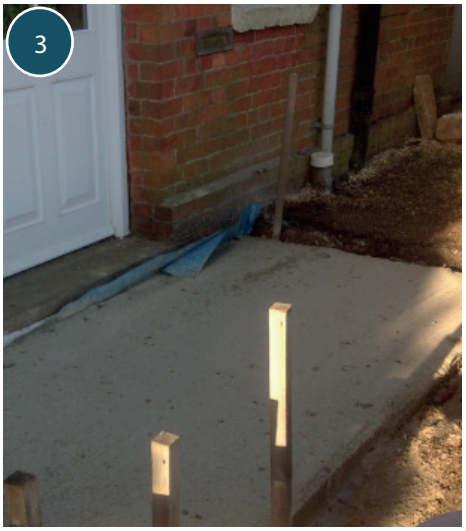
# Gibbs Porch Installation Guide

Before...

After...


Haddonstone delivery on shrink-wrapped pallets incorporating pallet manifests to help identification.


A typical pallet showing architrave stonework featuring 'D' lugs to ease installation.




Concrete foundations installed to correct dimensions and specifications (designed by others).


Column pedestal and base bedded on 1:1:6 cement/lime/sand mortar. Starter bar already installed. (Refer to Column Assembly Recommendations for more information).


Bottom shaft section bedded on the base as previously described.


It is important to check levels throughout the installation process.


Polystyrene/Styrofoam (or similar) should be used to act as an isolating medium between the stone and infill concrete.


Spacers are used to ensure the correct joints, normally 6mm (1/4").


Capital in place with starter bar protruding. Scaffolding must be used when working at higher levels.

General Note: Scaffolding must comply with Health & Safety Regulations.


Entablature in position showing 'D' lugs.


Exterior view of entablature showing supports, spacers and clamps.


Entablature with steel reinforcement and shuttering in place before concrete infill (designed by others).


Concrete infill underway.


Concrete infill of entablature complete.


Cornice stone installation underway.


Cornice stones being mechanically lifted into position.


Top view of cornice during installation.


Cornice stones in position with spacers still in position.

he required scaffolding elements have been removed for photographic purposes.


Columns, architrave and cornice all installed. Flat roof in position prior to leading.


Floor is installed at this point to reduce risk of damage taking place during construction. All cutting done on site.


Floor in position prior to pointing.


Pilaster base during installation. Note: wiring can be hidden behind these elements if required.


Pilaster shaft sections during installation.


Internal view of roof structure and exposed concrete infill to architrave.


Lead roof installation to ensure waterproof structure.


The finished Gibbs Porch with all pointing completed. (Refer to Pointing Recommendations sheet for further details).

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# HADDONSTONE

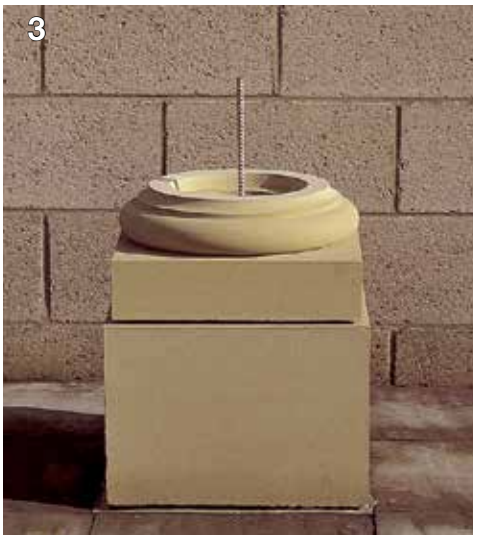
# COLUMN ASSEMBLY RECOMMENDATIONS

*To be read in conjunction with Tech Sheet CAD1/TS, appropriate column Tech Sheet and Pointing Recommendations.*

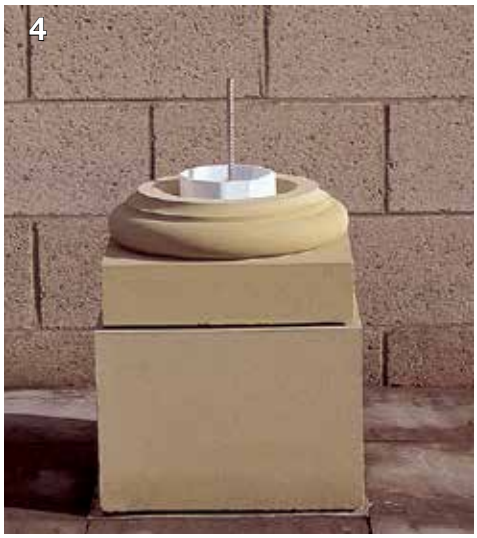
*The column is supplied in component form: ie capital, shaft, base, plinth and pedestal. Depending on column type, each column shaft is supplied in either one piece or multiple drum sections as detailed on the relevant Tech Sheets. Unless otherwise stated, all materials other than the stonework are to be supplied by others. Consult a qualified builder or installer to ensure all relevant Building Regulations/Codes are adhered to prior to installation of columns.*


The column should be erected on a suitable foundation. Foundation, concrete and steel reinforcement to be designed by others to suit loadings and ground conditions. Shown is a suitable steel starter bar set into a concrete foundation.


The pedestal is then bedded on 1:1:6 cement/ lime/sand mortar. All joints would normally be 6mm (¼") with the mortar slightly recessed from the surface of the stonework to allow for pointing after the column is erected.




The column base is bedded on the pedestal as previously described.




It is important that polystyrene/Styroforam (or similar) is used to act as an isolating medium between the stone and infill concrete. This is inserted into the core of the pedestal and base. Care should be taken to ensure sufficient overlap at both vertical and horizontal joints with continuous contact between the isolating material and the inner stonework core.


The pedestal and base are then infilled with concrete. The course aggregate of the concrete being rounded gravel of maximum 10mm (⅜"). All subsequent concrete pours should only take place after the concrete in the preceding section has reached its initial set.


The steel main bar reinforcement is tied to the starter bar insuring sufficient overlap. The concrete is then carefully compacted by hand.


The bottom shaft section is then bedded and the isolating medium inserted as previously described. The concrete is again infilled.


The concrete is then hand compacted. The second and third shaft sections being installed in the same way (unless a single shaft unit).


The capital is then bedded. The isolating medium is inserted into the core. The core is then partly infilled with concrete as previously described


The isolating medium is then trimmed flush. Continue concrete infill until level with top of capital. The capital is now ready for the next stage, either (11) or (12).


Column ~ Entablature or Structure above: the joint around the structural core between the capital and the entablature or structure above should be formed using a compressible filler, or a weak mortar mix, to form a 6mm (¼") soft joint. This ensures that any loading is carried by the central structural core and not by the stonework.


Column ~ Freestanding or timber pergola: the top of the capital will need to be waterproofed, as a minimum, with bituminous paint (applied in accordance with manufacturers instructions) to approximately 25mm (1") from the edge of the stone.

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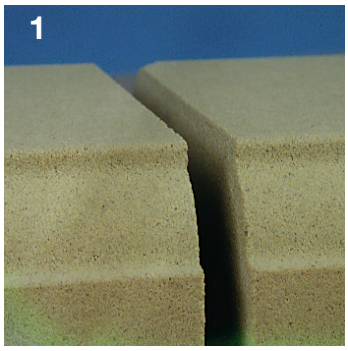
# HADDONSTONE

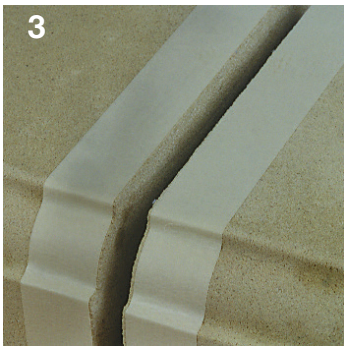
# HADDONSTONE POINTING RECOMMENDATIONS

Required: pointing mix, pointing trowel, masking tape, mixing bowl, water, mist sprayer.
Please note: all text and photographs relate to Haddonstone semi-dry pointing mix.




Before pointing ensure each 6mm (¼") joint is free from loose particles. Avoid pointing in extreme conditions, particularly wet and cold.

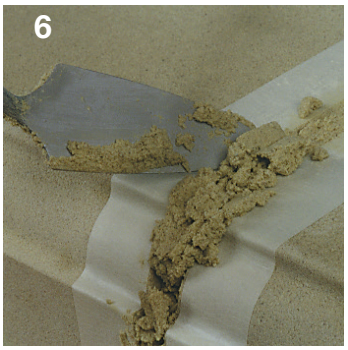

Apply masking tape to both sides of the joint, keeping the tape approximately 1mm ($^1/_{16}$") from the edge of the joint.



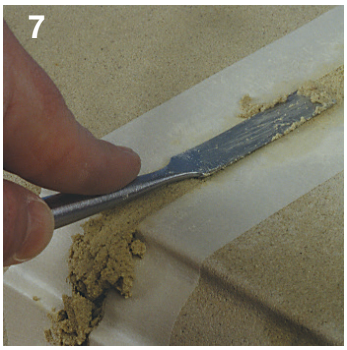

The joint is now ready to start pointing.


Carefully add small quantities of water to the Haddonstone pointing mix, mixing thoroughly to ensure the water is fully dispersed. **See note below*.

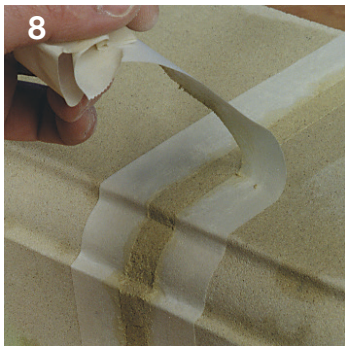

The Haddonstone pointing mix is ready to use when it has the consistency of damp sand. **See note below*.



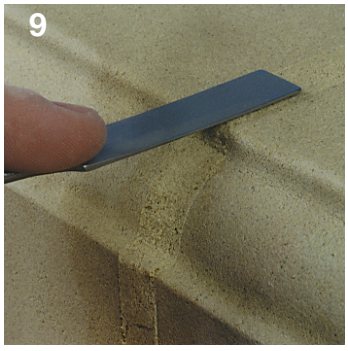

Scoop the mix into the joint, pressing with a trowel to ensure an even fill.



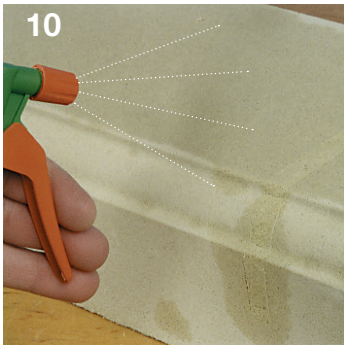

Smooth the pointing mix to the profile of the stone, removing any excess pointing mix.



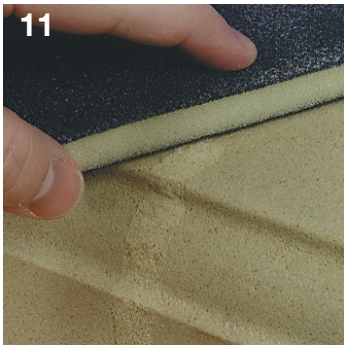

Carefully remove the masking tape.



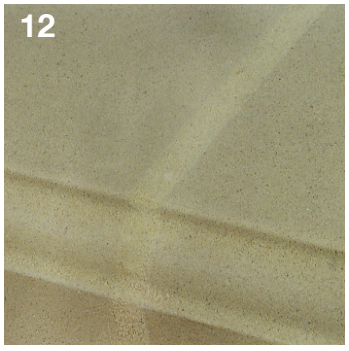

If necessary trowel over the joint once more to ensure a flush finish.




Apply a fine and even mist of water to the joint to prevent drying out.




Any mix residue may be rubbed away with fine abrasive paper 2-3 days after completion.




The finished joint.

** NOTE: It would be advantageous to use a waterproofing additive in the mixing water (SBR or other proprietary mortar admixture). The use of too much water can lead to the pointing mix colour and texture becoming unsightly, and the possibility of the mix bleeding into the adjacent cast stone.*

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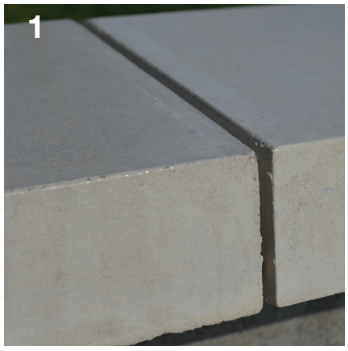
# HADDONSTONE

# TECSTONE POINTING RECOMMENDATIONS

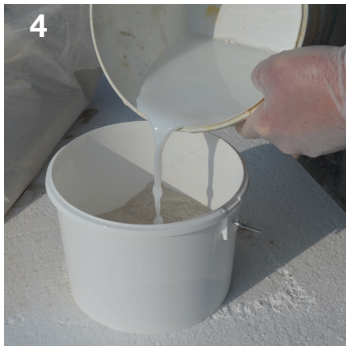
Required: pointing mix, pointing trowel, masking tape (if required), mixing bowl, water, sponge.
Please note: all text and photographs relate to TecStone pointing mix.




Before pointing ensure each 6mm (¼") joint is free from loose particles. Avoid pointing in extreme conditions, particularly wet and cold.

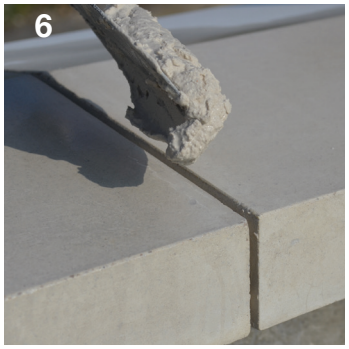

The TecStone pointing mix is supplied as separately bagged cement and aggregate with an information leaflet.


The cement and aggregate should first be mixed together dry in the ratio of 1 part cement to 4.5-6.5 parts aggregate.

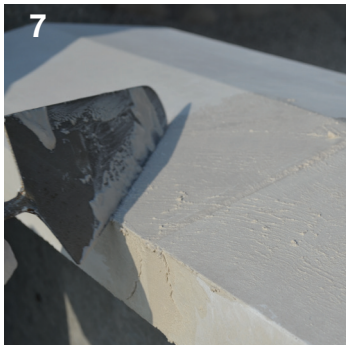



Carefully add small quantities of water to the TecStone pointing mix, mixing thoroughly to ensure the water is fully dispersed. **See note below*.


The TecStone pointing mix is ready to use when it has the consistency of putty. **See note below*.



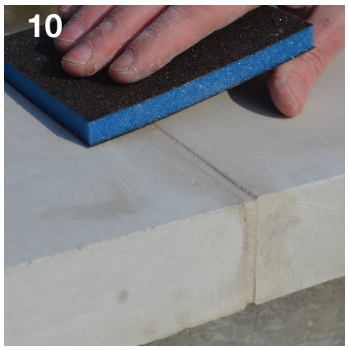

Scoop the mix into the joint, pressing with a trowel to ensure an even fill.



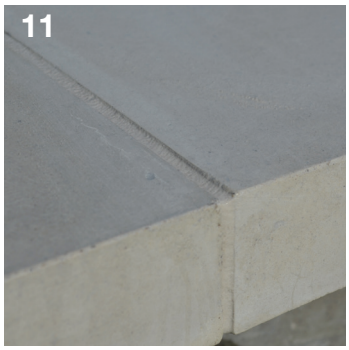

Smooth the pointing mix to the profile of the stone, removing any excess pointing mix.


Wipe over the surface of the joint and surrounding area with a dampened sponge to remove all surplus pointing material off the surrounding areas and ensure a flush finish to the joint.


If necessary trowel over the joint once more to ensure a flush finish.




Any mix residue may be rubbed away with fine abrasive paper 2-3 days after completion.




The finished joint.

** NOTE: It would be advantageous to use a waterproofing additive in the mixing water (SBR or other proprietary mortar admixture). The use of too much water can lead to the pointing mix colour and texture becoming unsightly, and the possibility of the mix bleeding into the adjacent cast stone.*

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