# BAYWALL™

## Structural Design Certificate

## General Usage

Whites CONCRETE

We certify that the design calculations for the structural elements of the Baywall panel units have been carried out by, or under the direct supervision of a Chartered Civil or Structural Engineer and are in accordance with the relevant British Standards and Codes of Practice listed below;

**STANDARDS:**

| | | |
|---|---|---|
| BS 8110-1:1997 | Structural Use of Concrete | Code of practice for design and construction. |
| BS 5502-20:1990 | Buildings and structures for agriculture | Code of practice for general design considerations |
| BS 5502-22:2003 | Buildings and structures for agriculture | Code of practice for design, construction and loading |
| BS 8500-1:2006 | Concrete. Complementary British Standard to BS EN 206-1 | Method of specifying and guidance for the specifier. |

**GENERAL USAGE**

The design capacities of the individual products are given below and should be assessed on a project by project basis for the proposed height of loading and the required spans between positions of support.

| Panel Reference | Ultimate Moment Capacity (kNm) (factored loads) | Service Moment Capacity (kNm) (working loads) | Ultimate Shear Capacity (kN) | Weight per Metre (kg/m) |
|---|---|---|---|---|
| 1000 x 150 | 97.00 | 60.07 | 284.90 | 360 |
| 1000 x 115 | 42.35 | 26.39 | 200.35 | 276 |
| 1000 x 80 | 13.54 | 8.90 | 136.80 | 192 |

| **EXPOSURE CONDITION** | **CLASS** |
|---|---|
| Corrosion induced by carbonation | XC1, XC2, XC3, XC4 |
| Corrosion induced by chlorides other than sea water | XD1, XD2 |
| Freeze/thaw attack | XF1, XF3 (check aggregate) |
| Corrosion induced by chlorides from sea water | XS1 Airborne salts only – No direct contact.<br>Not suitable for salt storage without protective coating. |
| Nominal cover to reinforcement within standard unit – 30mm<br>Exposure conditions and classifications are obtained from BS500 for an Intended working life at least 50 years | |

Signed: Andrew Rimmington

Andrew Rimmington BEng CEng MIStructE

Dated: 7th April 2014

For and on behalf of **ARC Engineers Ltd**

arcengineers

CONSULTING STRUCTURAL AND CIVIL ENGINEERING DESIGNERS

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Whites Concrete is a trading name of

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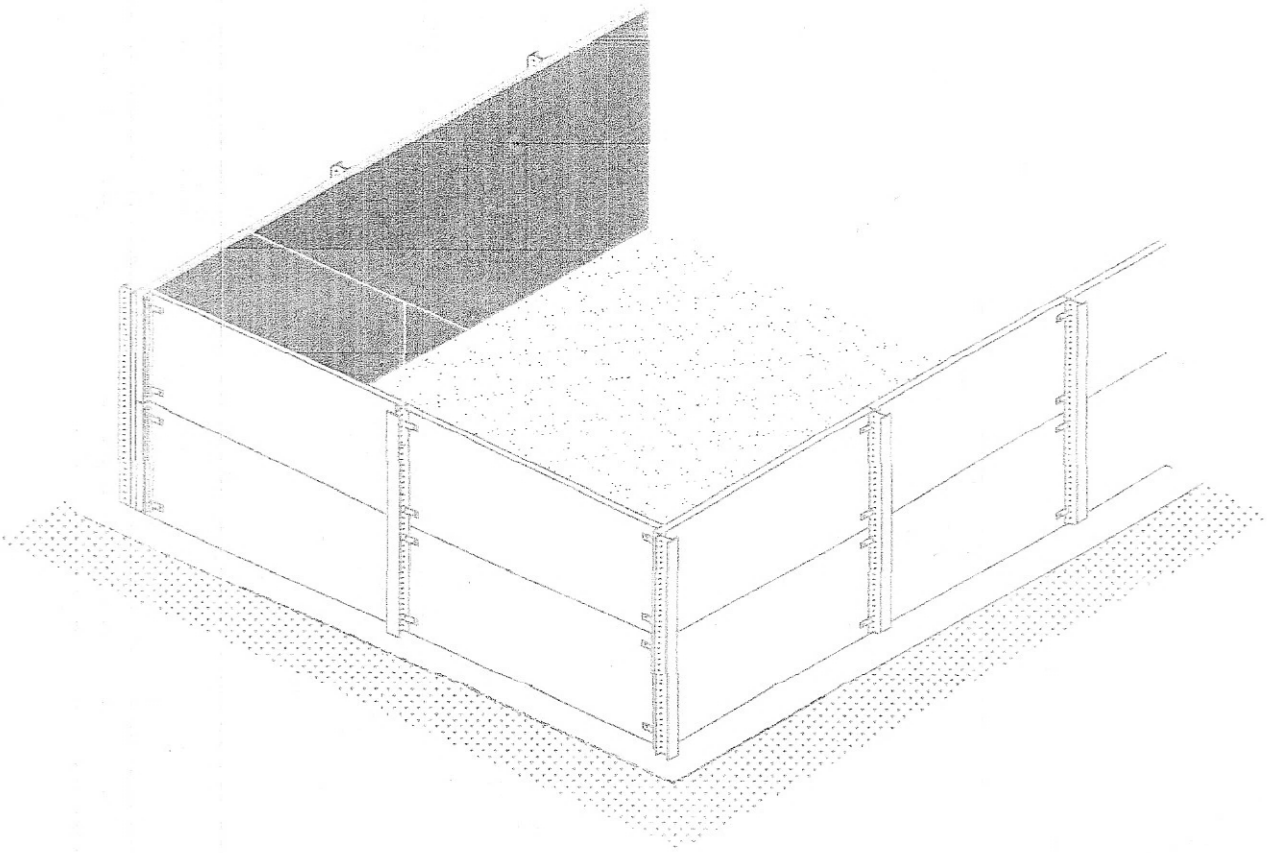
# Specification of Works

*for the*

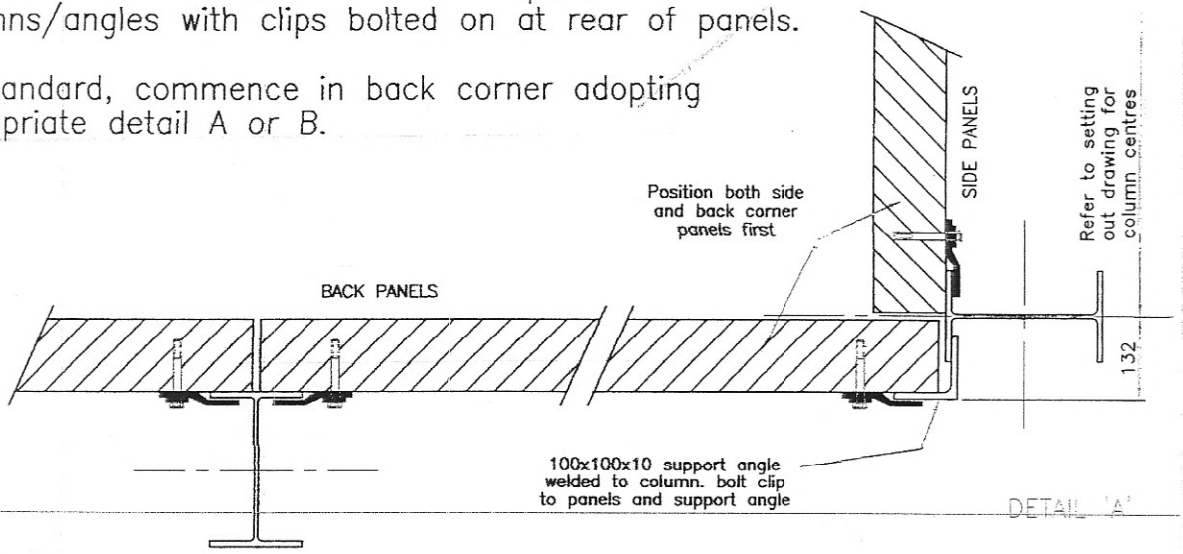
# Installation of Baywall Precast Concrete Retaining Units



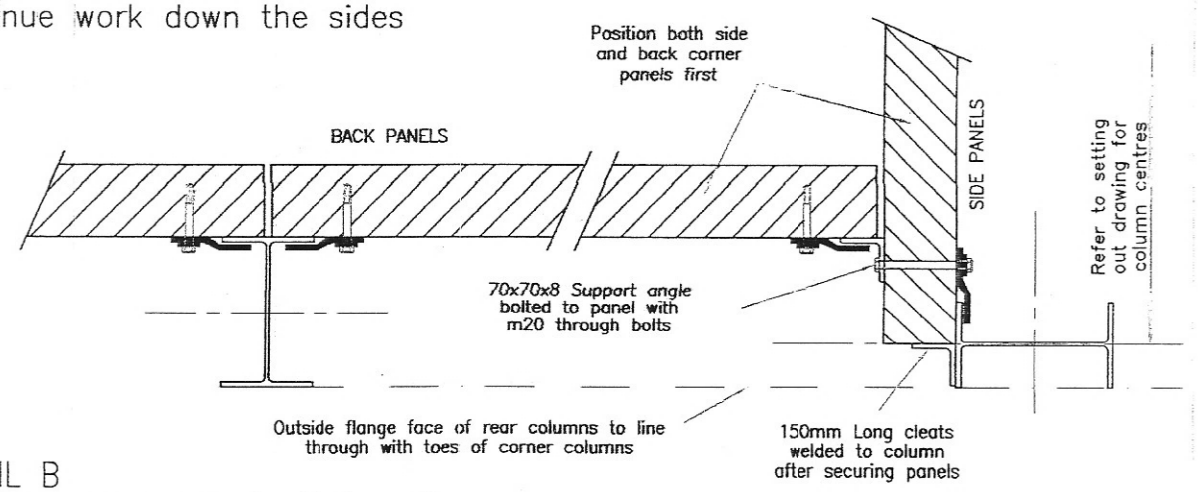
# INSTALLATION OF PANELS

Commence positioning bottom panels lifting into position up to face of steel columns. Secure panels to columns/angles with clips bolted on at rear of panels.

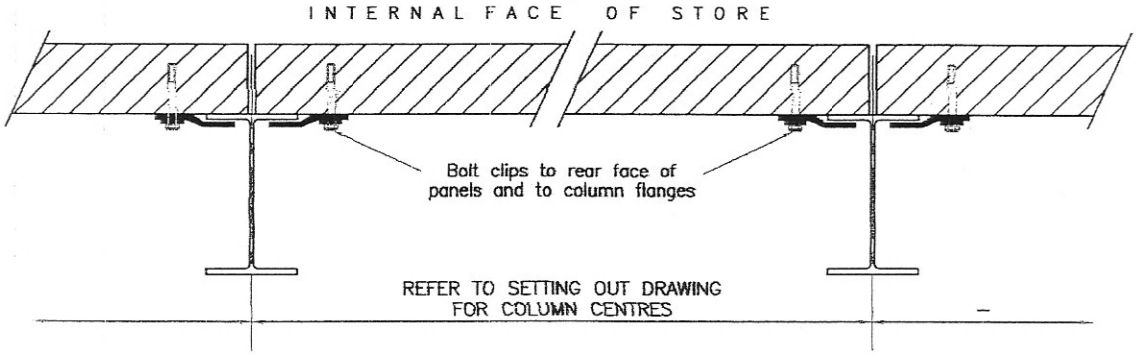
As standard, commence in back corner adopting appropriate detail A or B.




DETAIL A
Weld support angle to steel column as shown and clip panels to it. Complete full back wall first then continue work down the sides




DETAIL B
Position corner panels first and clip in place as shown. Complete full back wall first then work down the sides.



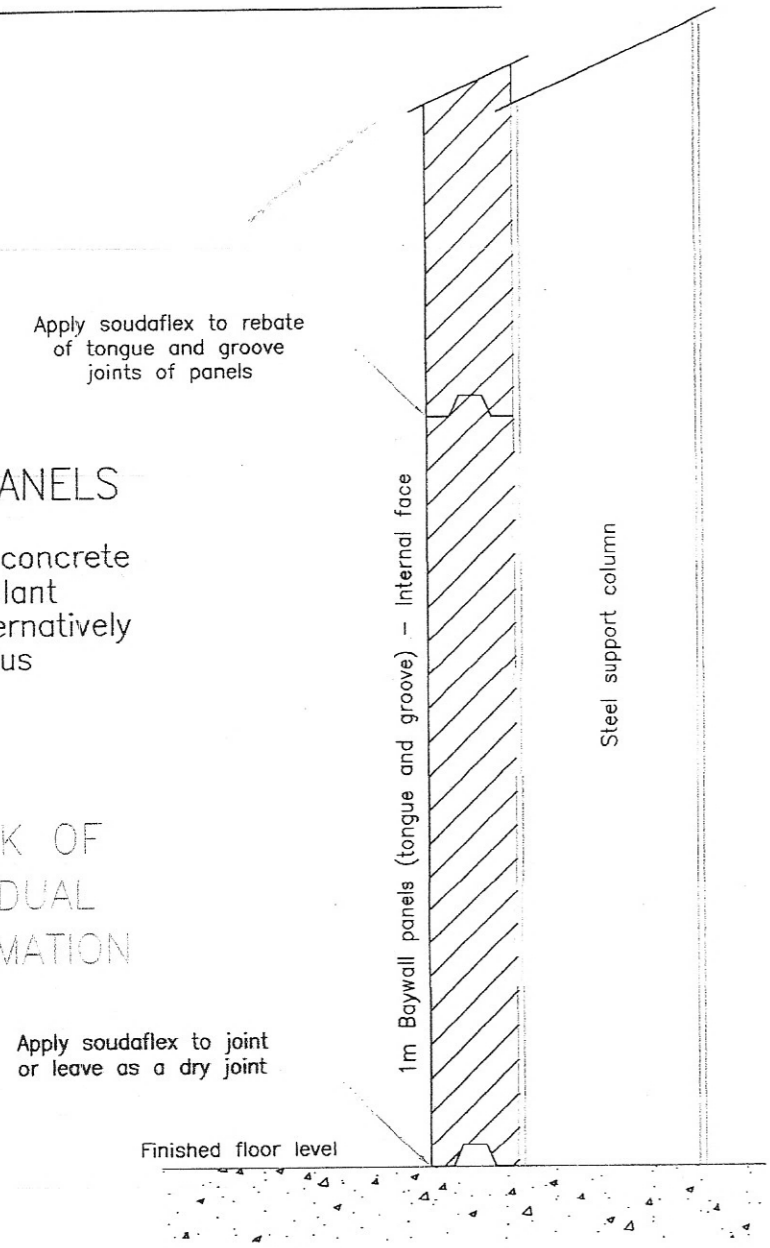

STANDARD DETAIL

# SEALING AND JOINTING OF PANELS

## HORIZONTAL JOINTS TO PANELS

Bottom panel may be sealed to concrete floor slab using polyurethane sealant (Soudaflex) to inside face or alternatively left as a dry joint to allow surplus effluent to transfer into gully.

REFER TO NOTES AT BACK OF SPECIFICATION FOR INDIVIDUAL SEALANT PRODUCT INFORMATION

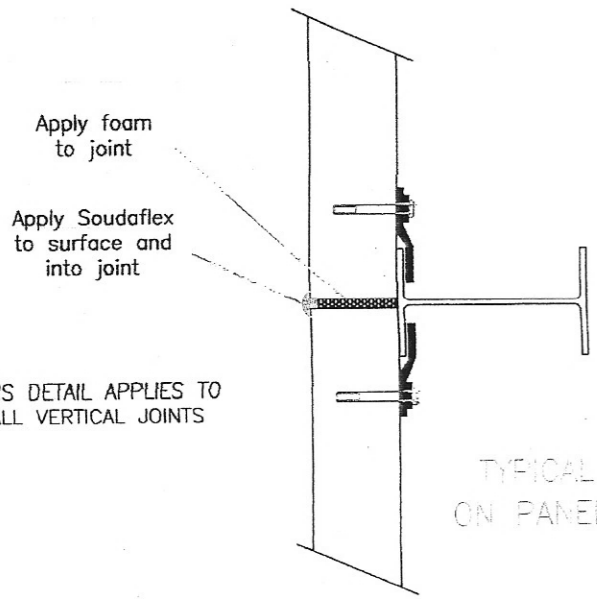



TYPICAL SECTION THRO' COLUMN/PANELS

## VERTICAL JOINTS TO PANELS

Apply Soudafoam filler to depth of vertical joint and trim back after hardening to form rebate.

Apply polyurethane sealer (Soudaflex) to surface and tool into joint.




THIS DETAIL APPLIES TO ALL VERTICAL JOINTS

TYPICAL PLAN ON PANEL JOINT