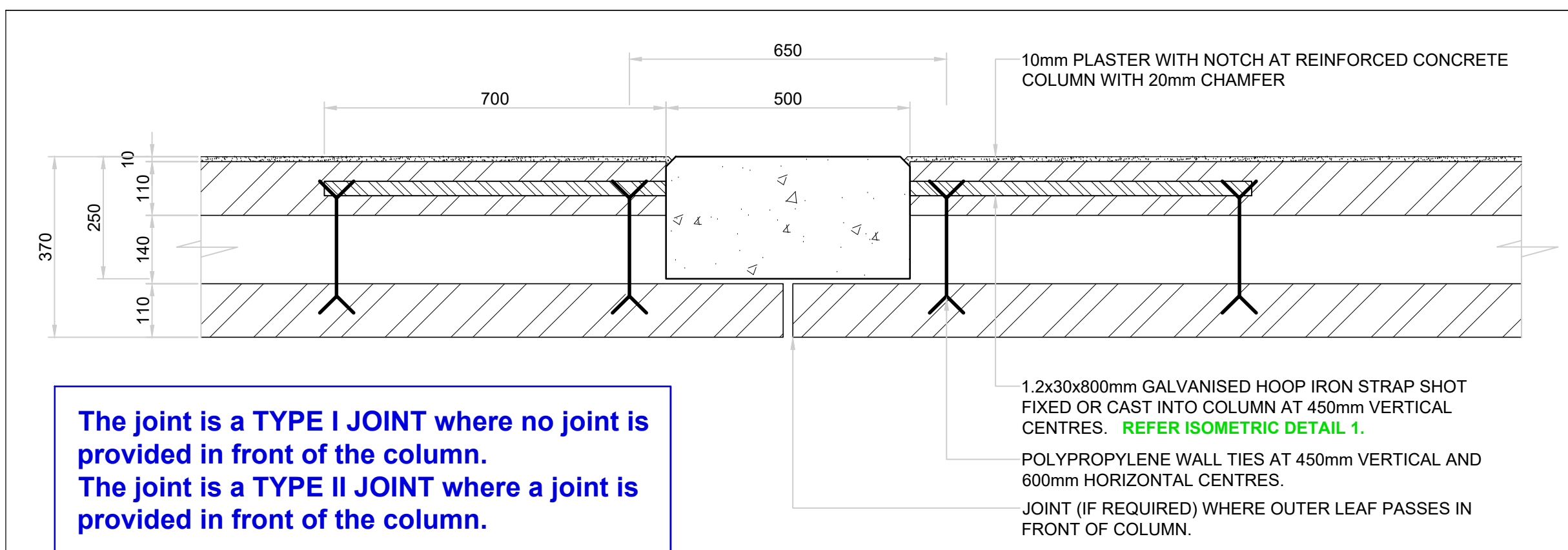


The joint is a TYPE I JOINT where no joint is provided in front of the column.
The joint is a TYPE II JOINT where a joint is provided in front of the column.

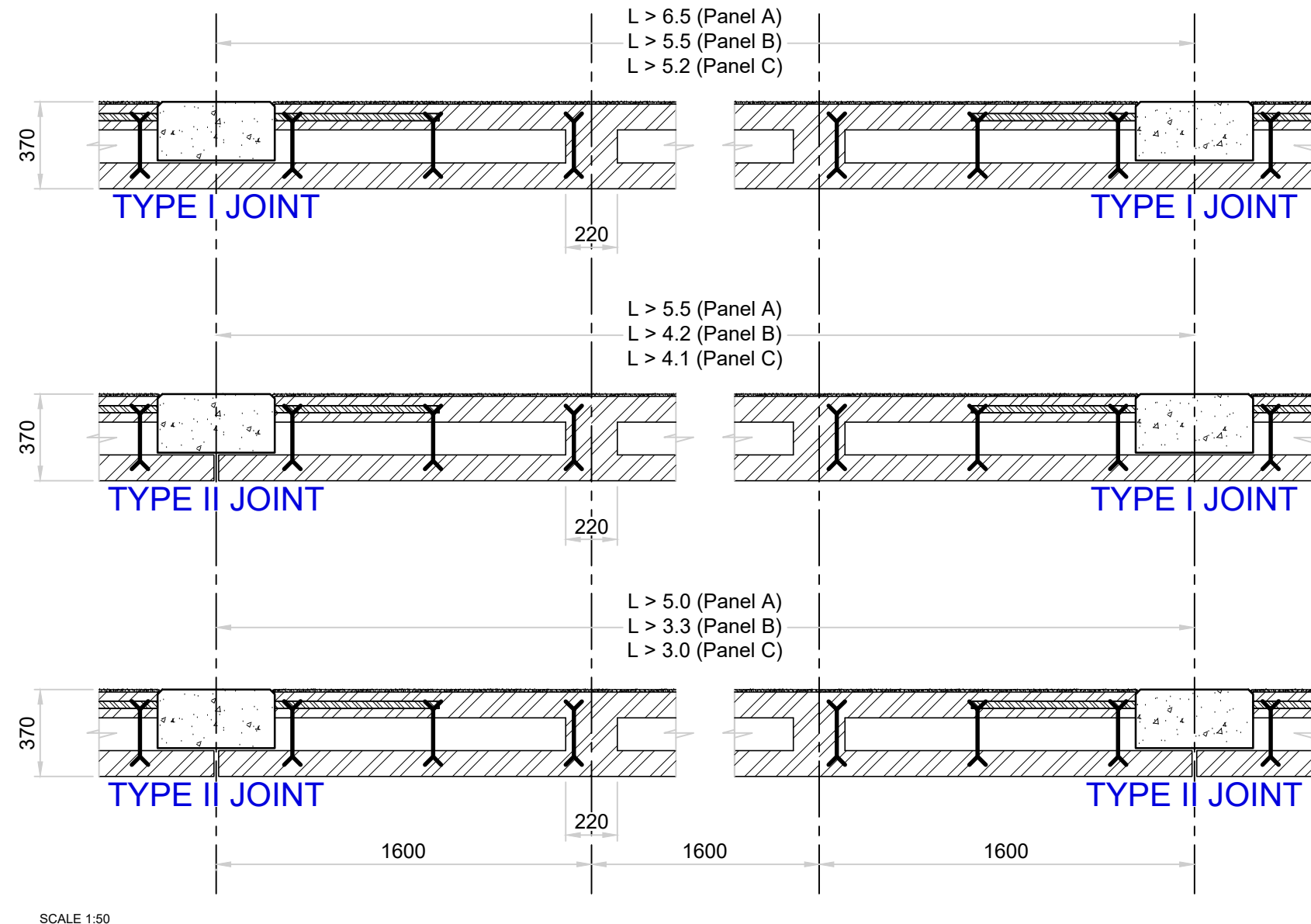
PLAN DETAIL 1:
TYPICAL ON MASONRY-TO-CONCRETE CONNECTION
EXTERNAL FLEMISH-BOND WALLS (REFER ISOMETRIC DETAIL 2)
SCALE 1:10



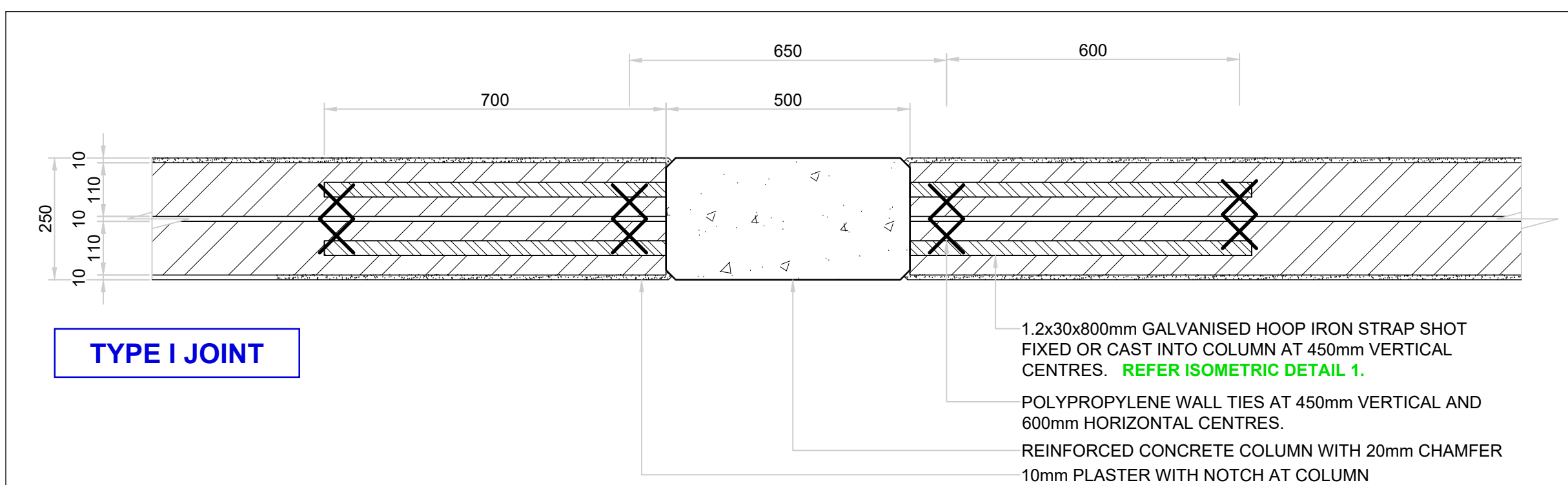
The joint is a TYPE I JOINT where no joint is provided in front of the column.
The joint is a TYPE II JOINT where a joint is provided in front of the column.

SCALE 1:10

Where panel length L exceeds maximum dimensions indicated in Table 1, include 220x370mm piers at 1.6m centres in Diaphragm Wall.

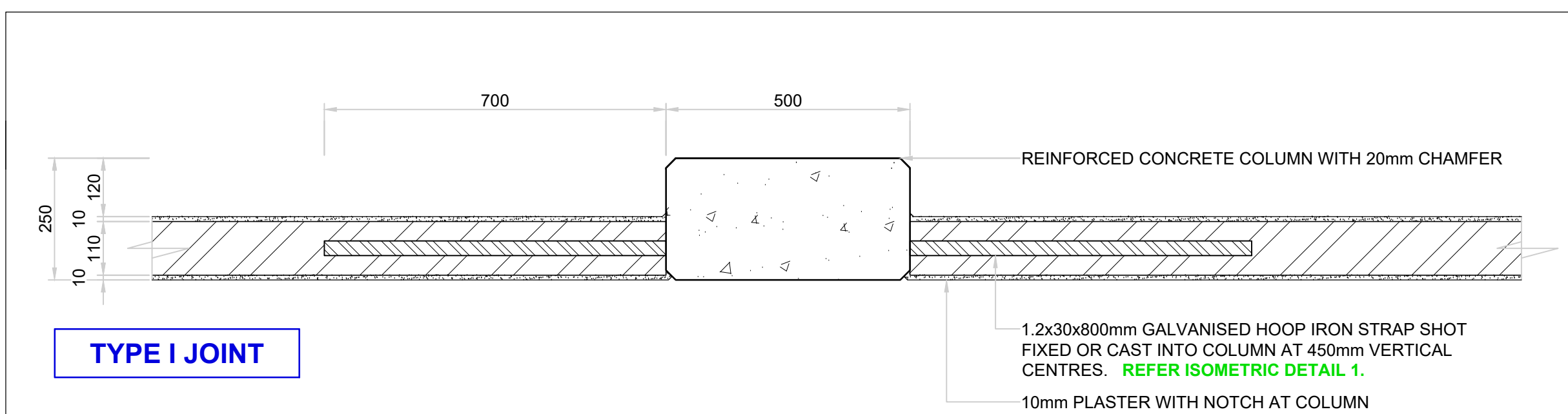


PLAN DETAIL 2:
TYPICAL ON MASONRY-TO-CONCRETE CONNECTION
EXTERNAL DIAPHRAGM WALLS
SCALE 1:10



TYPE I JOINT

PLAN DETAIL 3:
TYPICAL ON MASONRY-TO-CONCRETE CONNECTION
INTERNAL COLLAR-JOINTED WALLS
SCALE 1:10

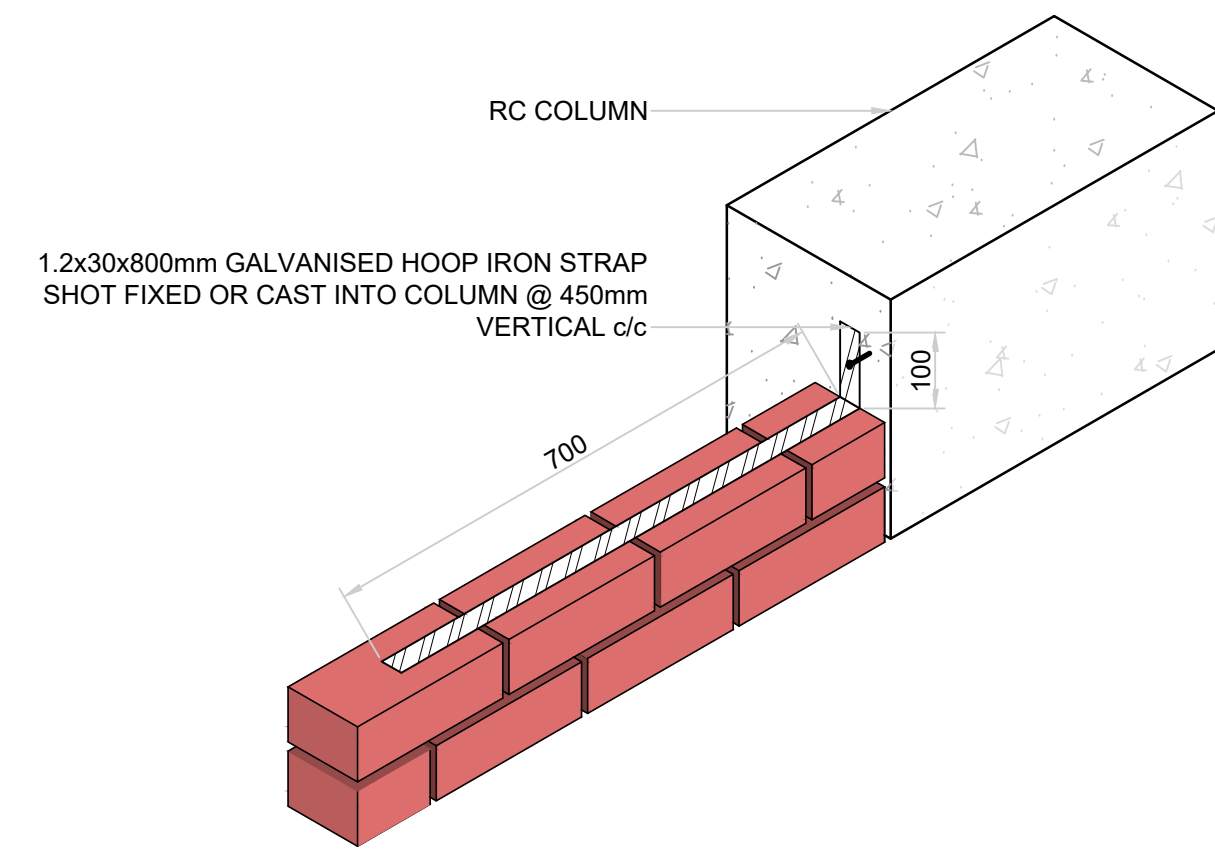


TYPE I JOINT

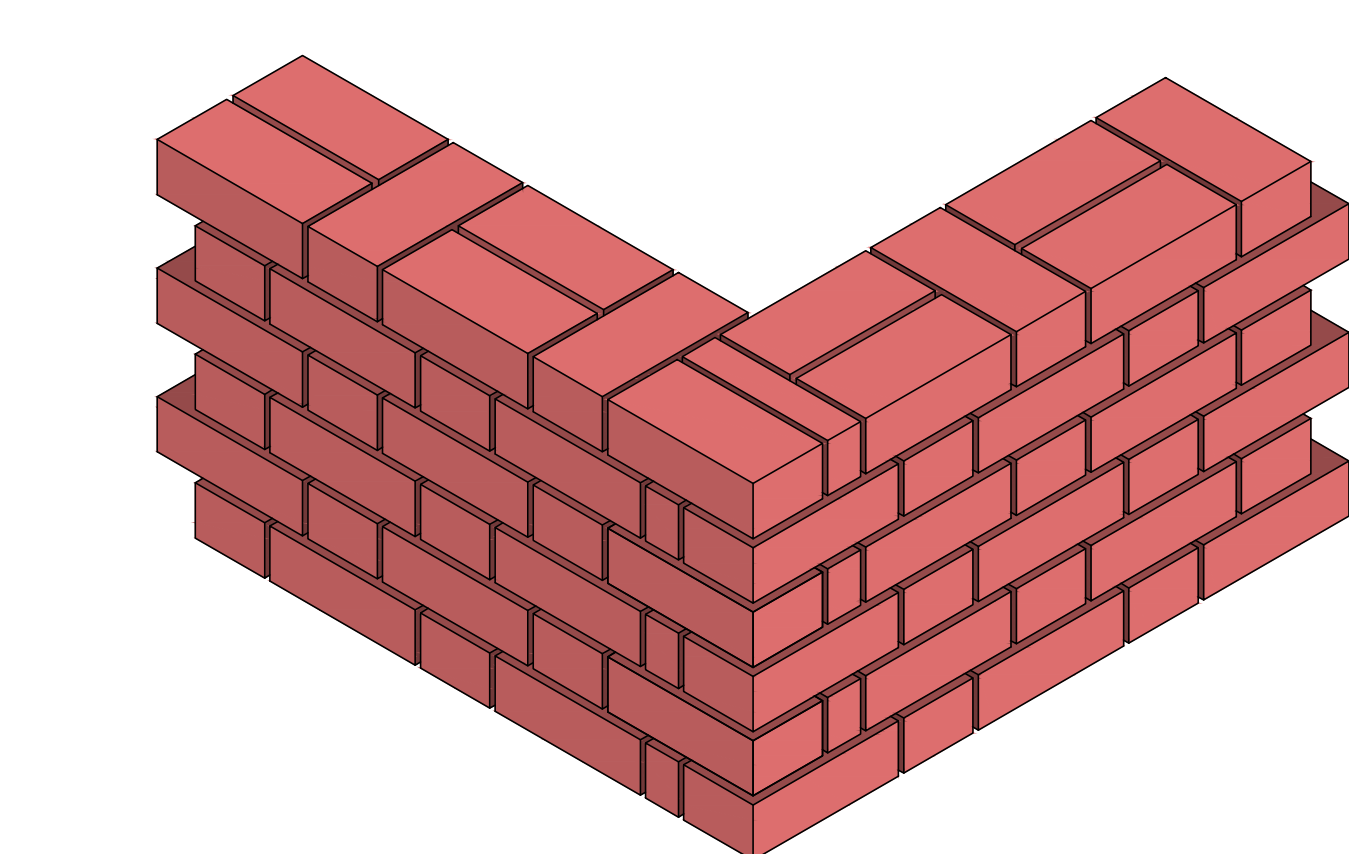
PLAN DETAIL 4:
TYPICAL ON MASONRY-TO-CONCRETE CONNECTION
INTERNAL SINGLE-LEAF WALL
SCALE 1:10

- NOTES:
- The first 100mm in hoop-iron straps shall be either fixed to concrete by means of a 3.0mm Ø (minimum) drive pin or cast into concrete at vertical c/c that do not exceed 450mm.
 - The drive pin shall be located as close to the bend in the strap as is practicable.
 - Cores in masonry units shall be filled with infill concrete.

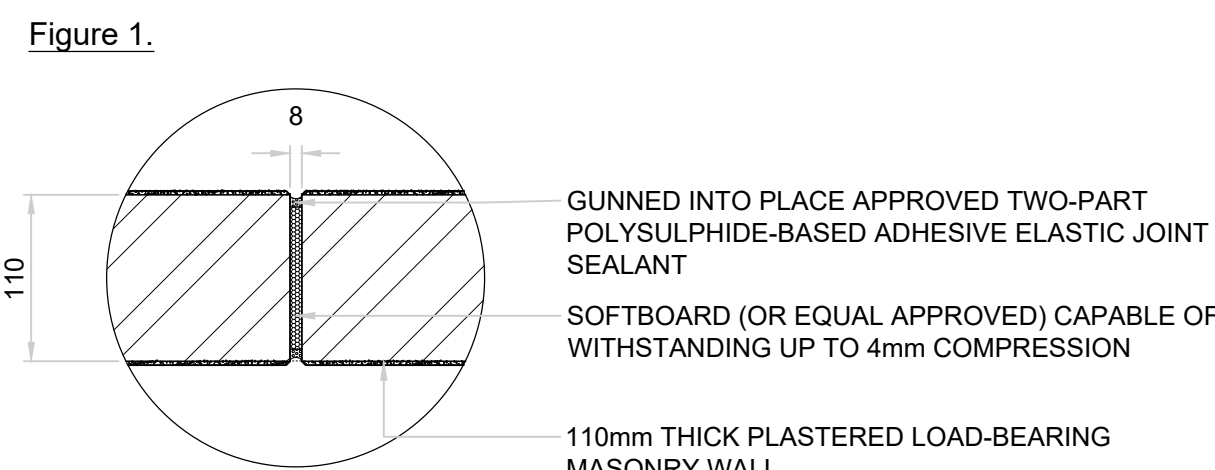
TYPE I JOINT



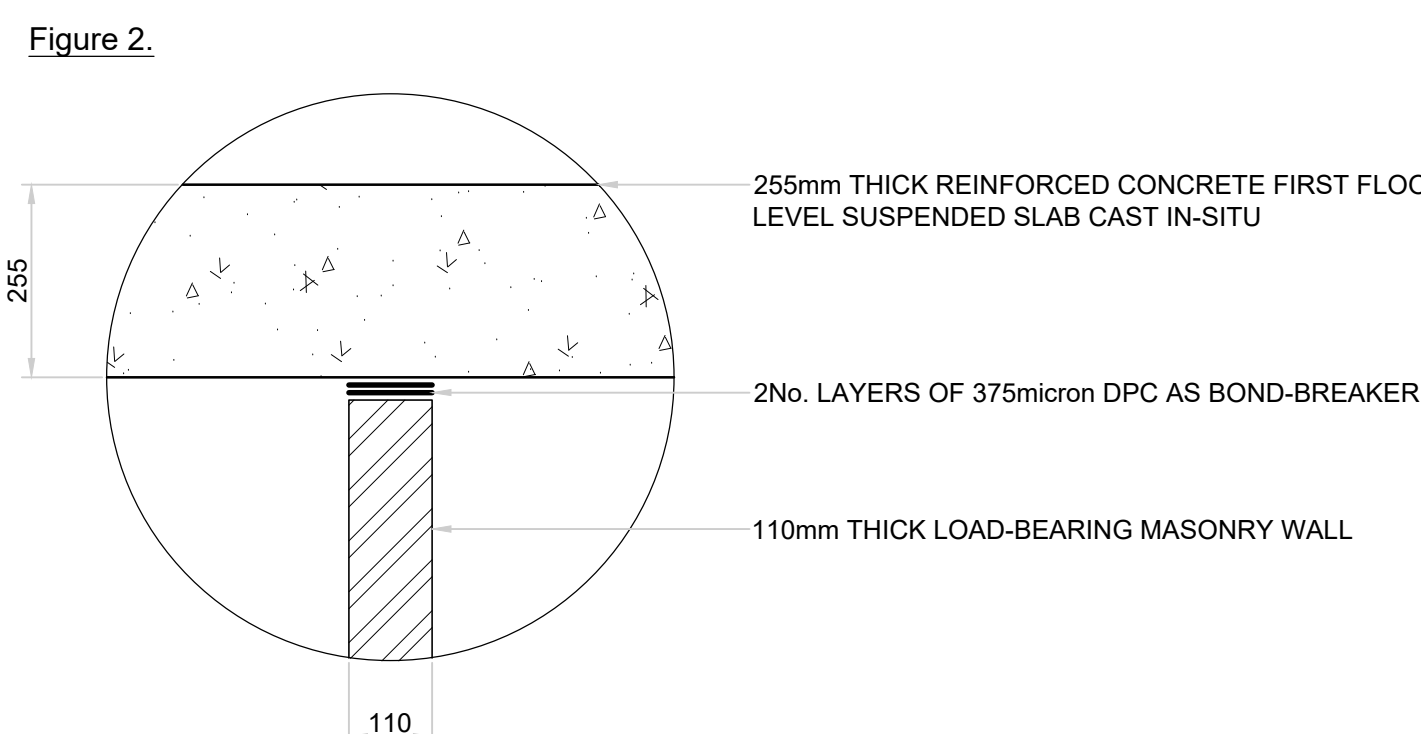
ISOMETRIC DETAIL 1:
TYPICAL ON STRAP CONNECTION
SCALE 1:10



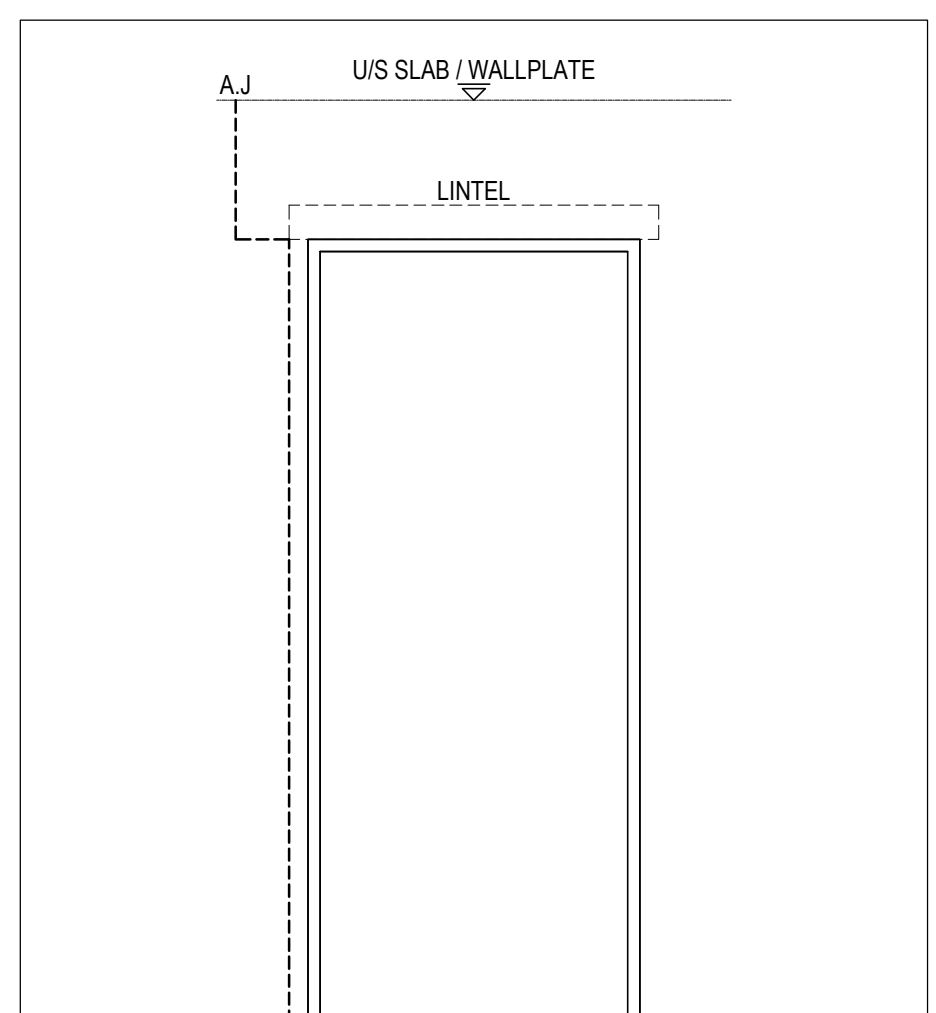
ISOMETRIC DETAIL 2:
TYPICAL FLEMISH BOND
SCALE 1:10



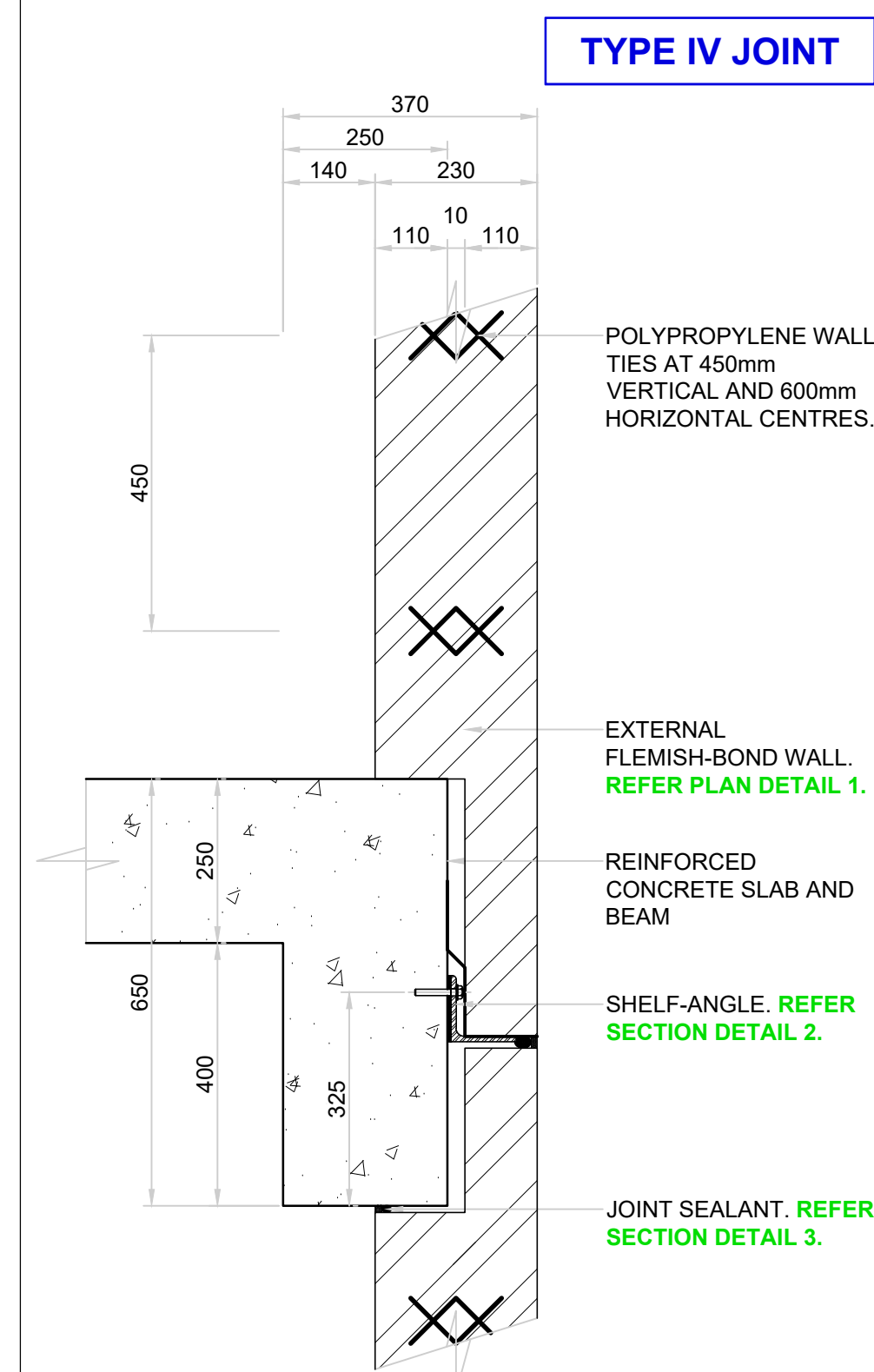
DETAIL:
PLAN ON TYPICAL ARTICULATION JOINT IN WALL
N.T.S



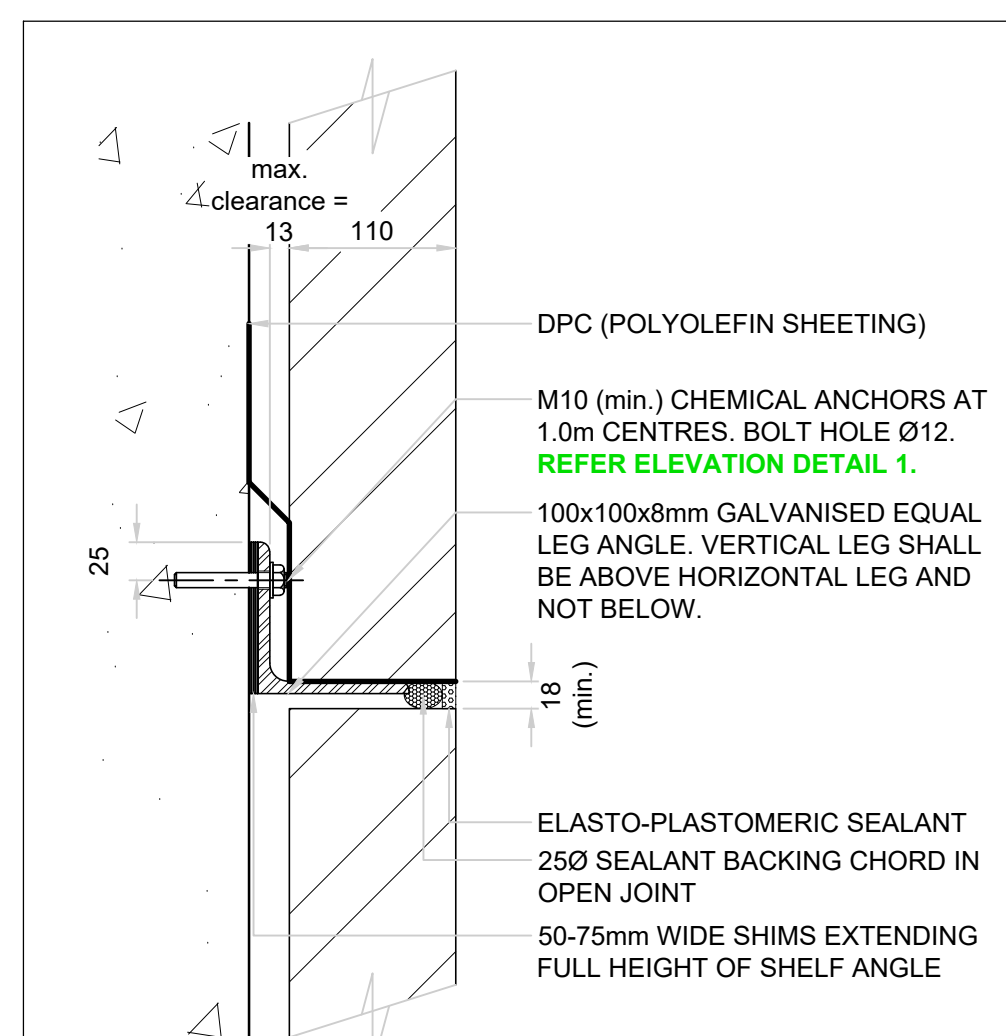
DETAIL:
SECTION THROUGH TYPICAL SLIP-JOINT IN WALL
N.T.S



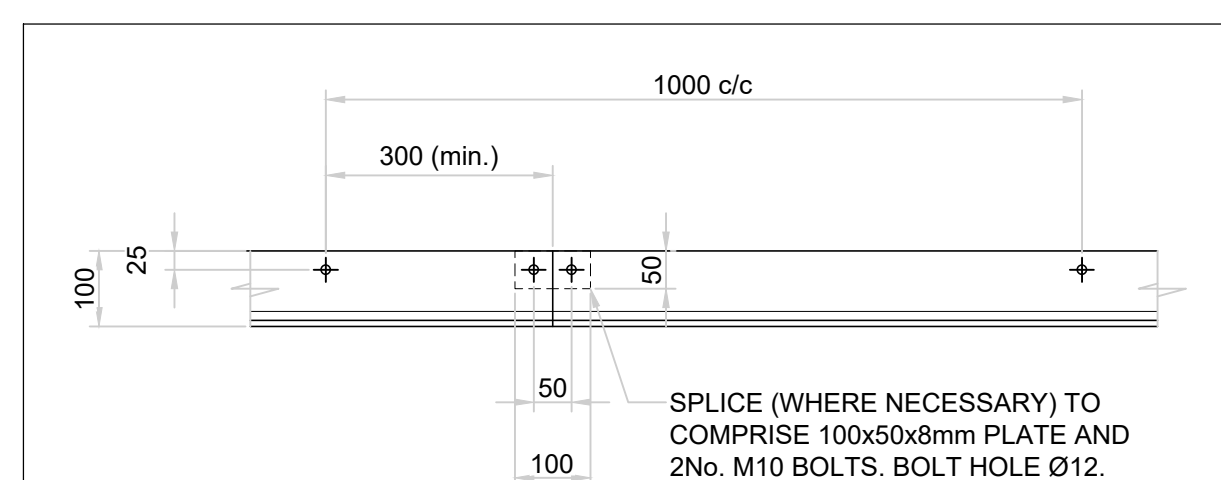
ELEVATION:
ARTICULATION JOINT (A.J)
POSITION AT EDGE OF OPENING
SCALE 1:20



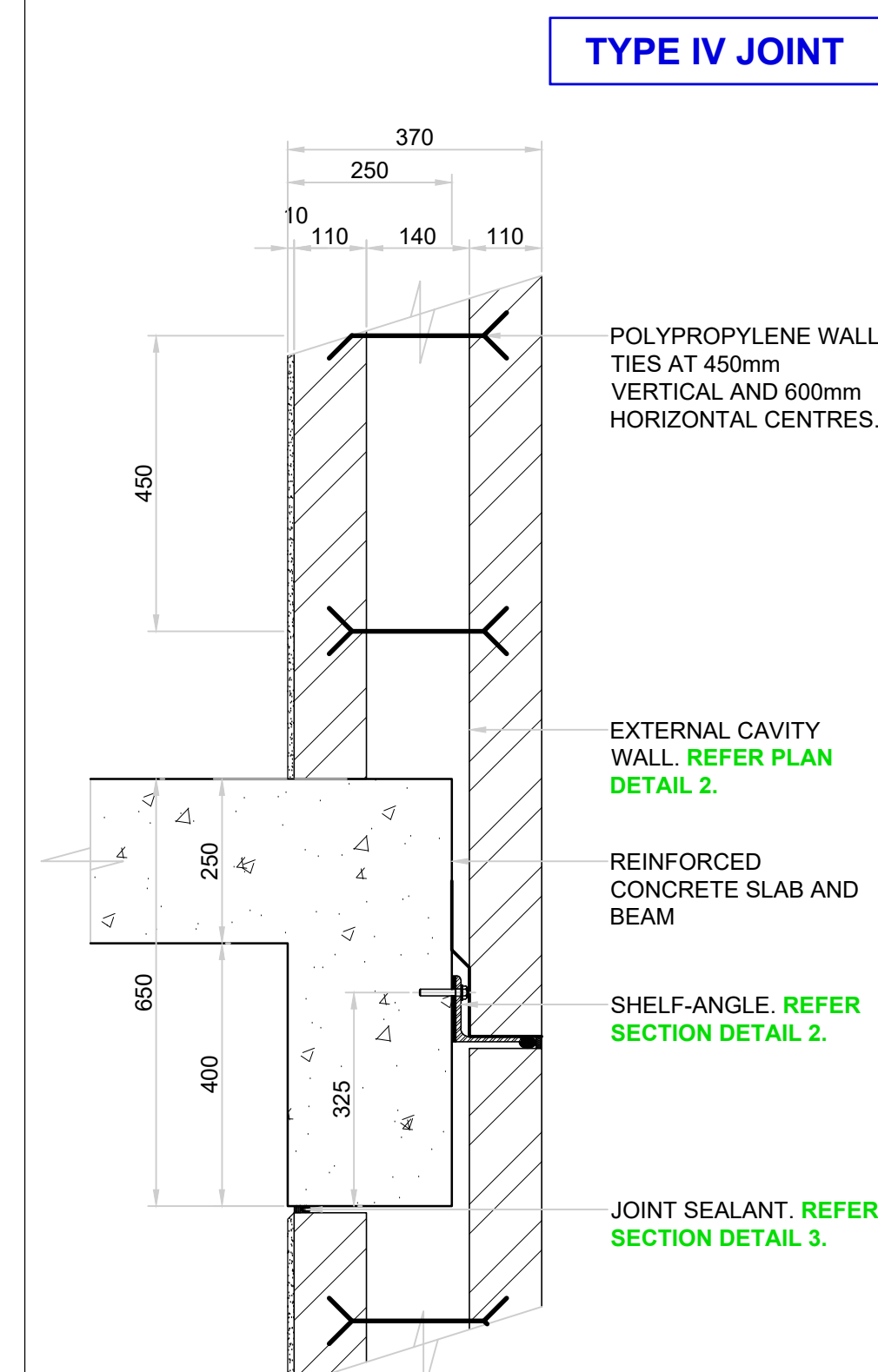
SECTION DETAIL 1:
TYPICAL ON MASONRY-TO-CONCRETE CONNECTION
EXTERNAL FLEMISH BOND WALLS
SCALE 1:10



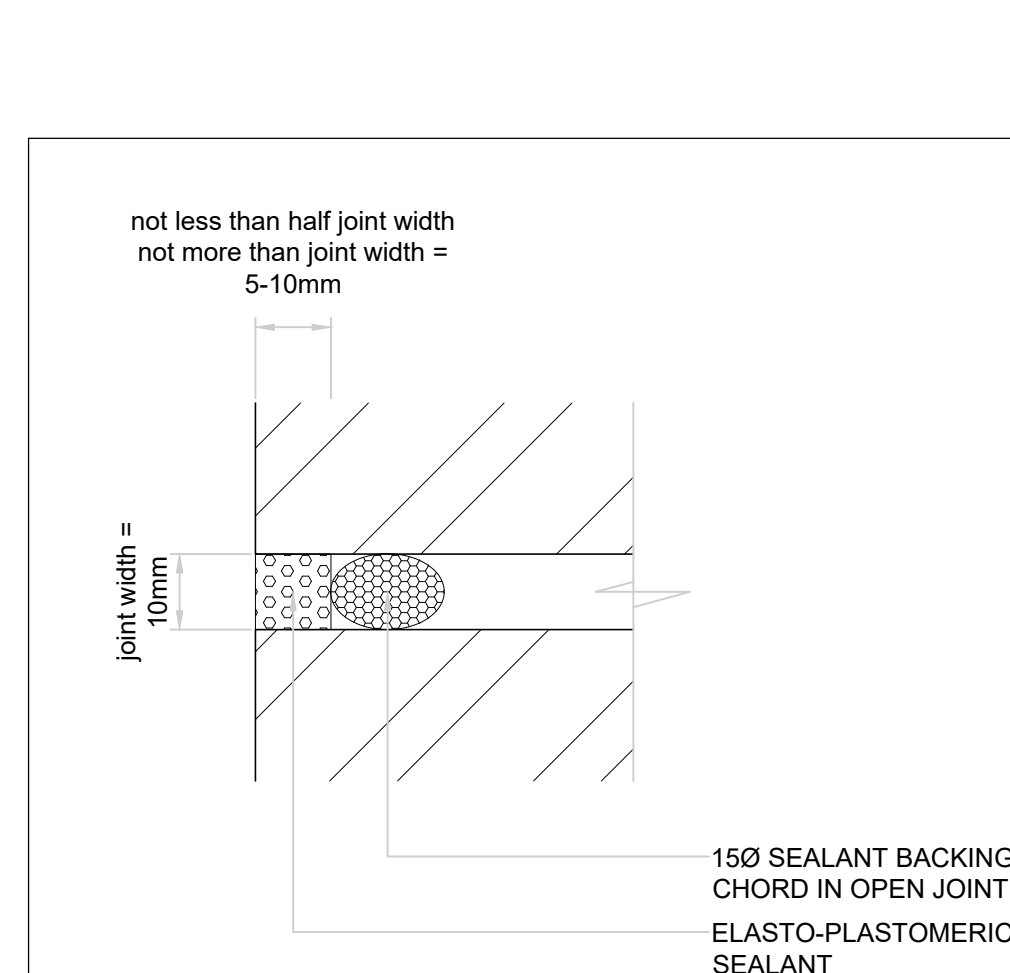
SECTION DETAIL 2:
TYPICAL THROUGH SHELF-ANGLE
SCALE 1:5



ELEVATION DETAIL 1:
TYPICAL ON SHELF-ANGLE
SCALE 1:10



SECTION DETAIL 4:
TYPICAL ON MASONRY-TO-CONCRETE CONNECTION
EXTERNAL DIAPHRAGM WALLS
SCALE 1:10



SECTION DETAIL 3:
TYPICAL JOINT SEALANT DETAIL
SCALE 1:1

To be read in conjunction with Architect's Drawing Reference . . .

Insulation, waterproofing, and drainage of External Cavity Walls by Architect.

All work to be carried out in accordance with SANS 10400-K:2011 unless indicated otherwise.

Any deviations during construction to be reported to and/or approved by the Engineer.

Masonry Notes

- M1. All masonry materials, components, workmanship and testing shall comply with SANS 10164: "The Structural Use of Masonry".
- M2. All building work to be carried out in accordance with the South African National Standard for the Application of the National Building Regulations, Part K: Walls (SANS 10400-K: 2011).
- M3. The minimum thickness of all masonry walls is as follows. No hollow units permitted:
- External Walls: 220 mm
 - Internal Walls: 110 mm
- M4. The maximum length of all internal walls at Ground Floor level shall be 7.0m. Ground Floor masonry panels in excess of 7.0m length shall incorporate control joints (at 7.0m centres). 15.0mm in width similar in detail to that shown at Figure 1 above.
- M5. The minimum crushing strength of all structural masonry shall be 14MPa and the maximum water absorption 12%.
- M6. Clay bricks to be soaked in a water bath prior to use.
- M7. The minimum crushing strength of structural mortar shall be as per Class 1 mortar (1:4 cement:sand, but not less than 10MPa) as per SANS 10164 Part 1.
- M8. All vertical and horizontal joints between bricks to be filled solid with mortar.
- M9. Vertical and horizontal chasing will be permitted only with the approval of the Structural Engineer and is to be limited to 35mm in depth. Where chasing exceeds 35mm in depth, following consult installation, the recess is to be dowelled with 10Y8 bars and caulked with a high-strength, non-shrink grout. (Detail to be advised.)
- M10. Masonry walls to be tied to concrete columns with 1.2x30x800mm galvanized hoop iron straps shot fixed with 2 M12/T1 shot studs each) or cast into concrete columns every 3rd course. Refer Figure 3 below.
- M11. All masonry to be reinforced with an approved brickforce every fourth course, and every course over openings to 2No. courses minimum.
- M12. All brickforce, masonry anchors and straps, and wall ties shall be hot-dip galvanized.
- M13. Wall ties to be of the modified PWD type or the vertical washer type as per SANS 10164 Part 1 Figure 1, positioned every 3rd course vertically and at 500mm c/c horizontally.
- M14. Masonry layout in accordance with the Architectural layouts.
- M15. Control joints in masonry to be provided at the positions indicated on the Architectural layouts; however, the maximum spacing thereof is limited to 7.0m c/c for all walls.
- M16. Wall joints to be repeated in all filled finishes.
- M17. All external joints to be sealed with a gunned-in-place, approved, two-part, polysulphide-based, adhesive, elastic joint sealer.
- M18. 120mm vertical joint to be formed at intersection of masonry walls with concrete columns.
- M19. Full depth V-joints to be made in plaster at intersection of masonry with concrete.
- M20. Lintels over openings to have a minimum 220mm bearing at each end.
- M21. Slip-joints comprising 2No. layers 375micron DPC to be formed on top of all masonry supporting a concrete slab. Refer Figure 2.
- M22. Non-load bearing masonry may not be built within 20mm of the soffits of concrete beams and sills unless indicated otherwise.
- M23. The maximum spacing of control joints in masonry balustrades is limited to 6.0m c/c.
- M24. All masonry plasterers to be trained by QES weepholes at 1.0m c/c installed above finished paving levels.

Rev.	Date	Drawn	Description
02	15-11-2024	D.J.P	CONSTRUCTION

PLEASE READ THOROUGHLY!!!!

GENERAL NOTES:

G1. All work to be carried out in accordance with the latest issue of SANS 1200 unless noted otherwise.

G2. All setting out to Architect's details.

G3. Piles, pile caps, ground beams, footings, and columns are central on grid lines unless Shown otherwise.

G4. Contractor to check all dimensions and levels prior to commencing work on site, and any discrepancies to be reported to the Engineer immediately.

CONCRETE NOTES:

C1. Binding concrete to be placed below all pile caps, ground beams, and footings and shall be a minimum of 50mm thick.

C2. Concrete mix design to SANS 10100. Design loads from SANS 10100 and Client's specification.

C3. Foundations designed for a bearing pressure of 100kPa. Refer to DRENNAN MAUD (PTY) LTD Report Ref. 22649P.

C4. All concrete to have a minimum compressive strength at 28 days as follows:

- Blinding: 15 MPa / 25mm
- Foundations: 25 MPa / 25mm
- Columns: 30 MPa / 19mm
- Surface Beds: 25 MPa / 19mm
- Suspended Slabs & Beams: 30 MPa / 19mm

C5. Concrete cover to main reinforcement:

- Foundations: 50 mm
- Columns: 30 mm
- Surface Beds: 50 mm
- Suspended Slabs & Beams: 30 mm

C6. Formwork classification:

- Concrete surfaces: Rough
- Exposed surfaces: Smooth (off-shutter)

C7. All sharp edges to concrete to have 20mm chamfers.

C8. Unformed surface finishes as follows:

- Surface Beds: Power-floated
- Suspended Slabs: Power-floated

C9. No in situ concrete to be cast without prior approval from the Engineer.

C10. The positions of all construction joints not shown on the drawings are to be discussed with and approved by the Engineer.

STEEL NOTES:

S1. Contractor to check all dimensions on site prior to fabrication.

S2. Any discrepancies to be reported to the Engineer immediately.

S3. No steelwork is to be fabricated prior to the Engineer's approval of shop drawings.

S4. Steelwork grades shall be as follows:

- Hot rolled sections: Grade S355JR to EN10025-2
- Hot rolled angles 50x50 and under and cold rolled open sections: Grade "CO" (Commercial Quality steel) to SANS 10102
- Hot formed hollow sections: Grade S355N to SANS 657-1.

S5. All hot rolled steelwork to be painted in accordance with the project specification.

S6. All cold rolled steelwork to be hot dip galvanized to SANS 121 and treated with a suitable degreasing agent.

S7. The ends of all tubular and hollow sections are to be sealed with nominal thickness plates and continuous fillet welds unless shown otherwise.

S8. All gusset and plates to be 10mm unless shown otherwise.

S9. Unless shown otherwise, purins and girts shall be continuous over at least two spans.

S10. All welds to be full strength U.O.N.

S11. Welding shall be performed by a certified welder in accordance with the requirements laid down in the latest issue of SANS 10044.

S12. Unless shown otherwise, all bolts shall be M16 Grade 4.8 to SANS 135.

S13. Exposed ends of holding-down bolts shall be protected from damage during and after placement of concrete.

S14. The Contractor shall provide and leave in place until permanent bracing elements are constructed, such temporary bracing as is necessary to stabilise the structure during erection.

IF IN DOUBT, ASK!!!

HEALTH DEPARTMENT SIGNATURES

DEPUTY DIRECTOR GENERAL: _____

HEAD OFFICE PROGRAMME / SERVICE: _____

DISTRICT MANAGER: _____

CEO MANAGER OF THE FACILITY: _____

DOH PROJECT MANAGER: _____

IMPLEMENTING AGENT PROJECT MANAGER: _____

PROFESSIONAL SERVICE PROVIDER: _____

Name: **S. S. Boyce (Pr. Eng. 20160768)**

Signature: _____ Date: 04/10/2024

Consultant: **DRENNAN MAUD (PTY) LTD**

GEOTECHNICAL ENGINEERS & ENGINEERING GEOLOGISTS

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health Department: Health PROVINCE OF KWAZULU-NATAL

KWAZULU-NATAL PROVINCE PUBLIC WORKS REPUBLIC OF SOUTH AFRICA

SOUTHERN REGION

Project: **DEPARTMENT OF HEALTH PORT SHEPSTONE HOSPITAL NEW PSYCHIATRIC WARD**

Drawing description: **STRUCTURAL MASONRY SECTIONS & DETAILS**

Drawn: I.B.U./D.J.P. Date: Aug 2019

Scale: As shown

Consultant Drawing number: **31319-S16** Rev: CO

Drawing number: **WIMS 044 044 / S / 16 / CO**

Stamped by Health Plans Approval Committee