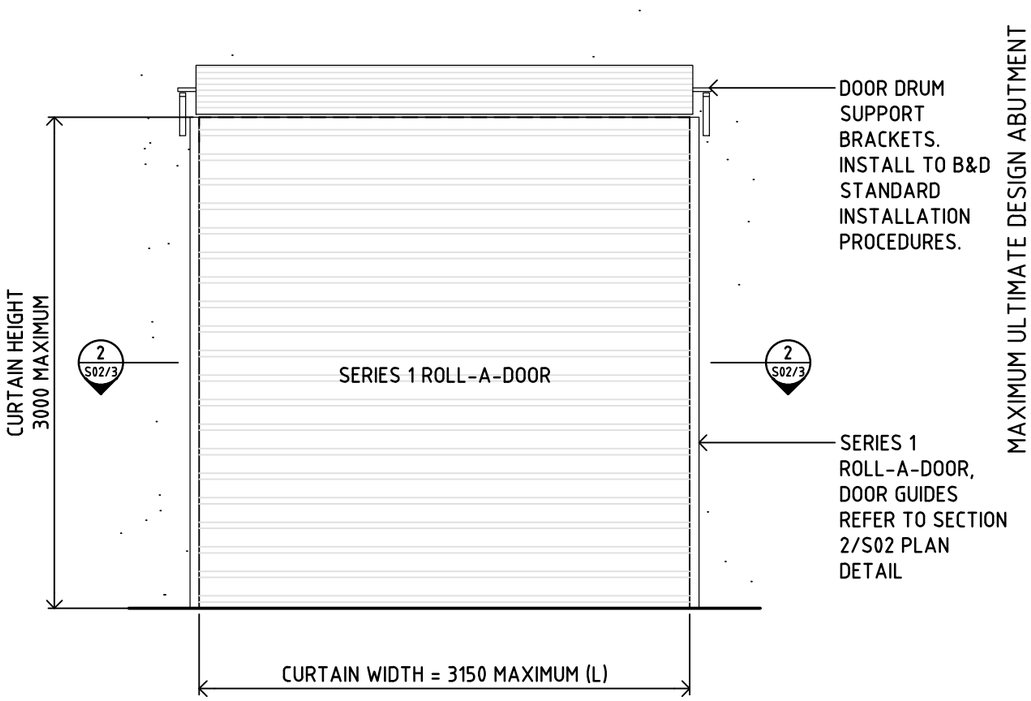
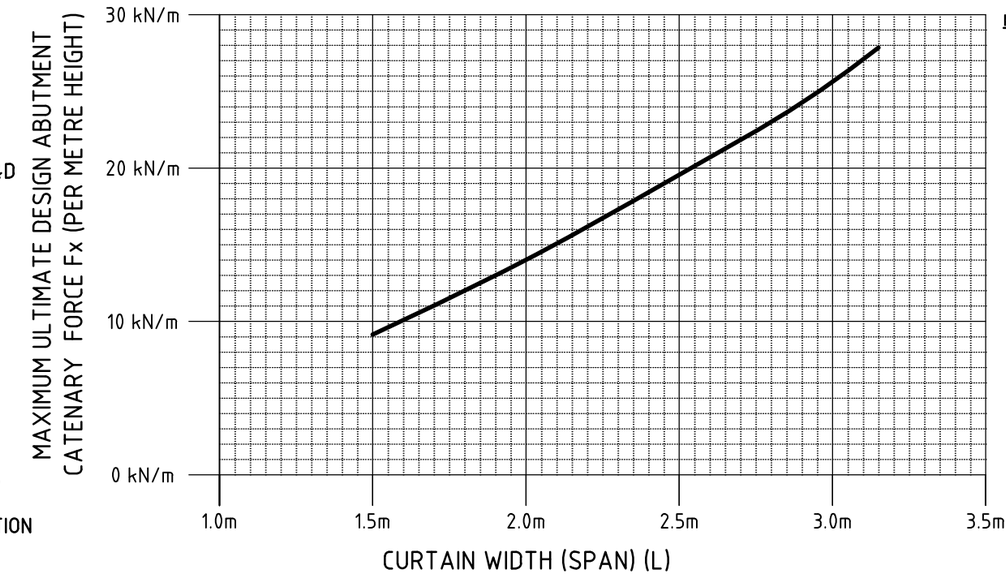


SERIES 1 ROLL-A-DOOR ELEVATION - TYPICAL

SCALE 1:50

NOTE:

- CURTAIN HEIGHT = OPENING HEIGHT
- OPENING WIDTH = CURTAIN WIDTH - CURTAIN OVERLAP (REFER SECTION 2 ON DRAWINGS S02 AND S03)



NOTE: CURTAIN WIDTH = OPENING WIDTH + CURTAIN OVERLAP

MAXIMUM ULTIMATE DESIGN ABUTMENT CATENARY FORCE Fx (PER METRE HEIGHT) FOR VARIOUS SPANS IN REGION C, TC2 FOR A DESIGN WIND PRESSURE OF 3.26 kPa

NOTE 1: $Fy = \frac{WL}{2}$

WHERE Fy = MAXIMUM OUT OF PLANE ULTIMATE DESIGN ABUTMENT FORCE (PER METRE HEIGHT)

W = ULTIMATE DESIGN WIND PRESSURE (kPa)

L = CURTAIN WIDTH (SPAN) (m)

NOTES :

DESIGN CRITERIA

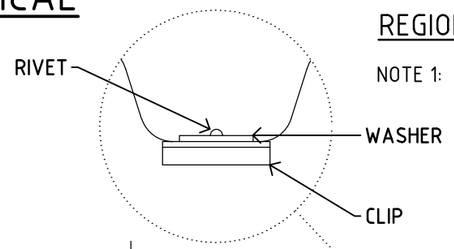
- (REFER ALSO TO NOTES COVERING BASIS OF DRAWINGS & LIMITATIONS)
- REGION C
- TERRAIN CATEGORY 2
- DOOR HEIGHT 3.0M MAX.
- BUILDING IMPORTANCE = LEVEL 2
- REGION WINDSPEED VR = 69.3m/s
- DOORS ARE RATED UP TO AN ULTIMATE DESIGN WIND PRESSURE = 3.26 kPa FOR A MAXIMUM ALLOWABLE CURTAIN WIDTH (L) OF 3150mm.

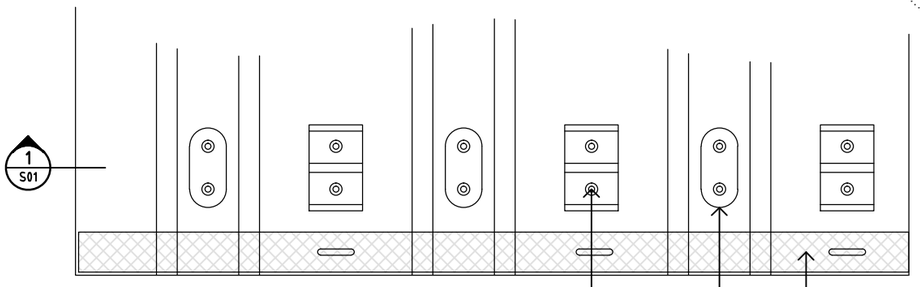
LIMITATIONS

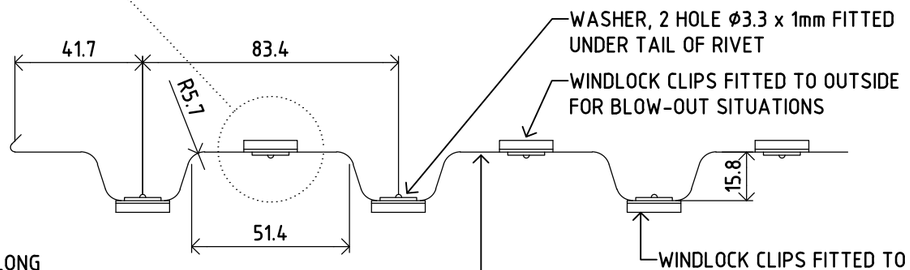
- ((REFER ALSO TO NOTES COVERING BASIS OF DRAWINGS AND DESIGN CRITERIA).
- STEEL ABUTMENT POSTS TO BE 2.4mm (MIN.) IN THICKNESS WITH A MINIMUM STRESS GRADE OF G250 U.N.O.
- CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF BLOCK WALL UNIT (f'uc) = 15 MPa (MIN.).
- CORE FILLING OF BLOCKWALL (f'c) = 15 MPa (MIN.).
- THE STRUCTURE TO WHICH THE DOOR IS ATTACHED SHALL BE ASSESSED AND CERTIFIED INDEPENDENTLY AS REQUIRED BY A SUITABLY QUALIFIED ENGINEER.
- ALTERNATIVE DESIGN PARAMETERS TO WHAT ARE SPECIFIED ON THESE DRAWINGS ALONG WITH ALTERNATIVE SITE SPECIFIC LOCAL PRESSURE FACTORS MAY BE ADOPTED PROVIDED THE CALCULATED ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED 3.26 kPa.
- THE BUILDING DESIGN ENGINEER IS TO ENSURE THAT THE SITE SPECIFIC DESIGN WIND LOADINGS DO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATING OF 3.26 kPa.
- DOORS MAY BE POSITIONED AT ANY LOCATION ALONG THE BUILDING ENVELOPE INCLUDING ALL LOCAL PRESSURE ZONES (ie. CORNERS OF BUILDINGS), PROVIDED THE CALCULATED ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED 3.26 kPa.

NOTES COVERING BASIS OF DRAWINGS

- TEST REPORT NO. TS894 REVISION A (CYCLONE TESTING STATION, SCHOOL OF ENGINEERING AND PHYSICAL SCIENCES, JAMES COOK UNIVERSITY).
- PRINCIPLES OF MECHANICS.
- AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS-PART 2: WIND ACTIONS.
- AS/NZS 1170.0:2002 STRUCTURAL DESIGN ACTIONS-PART 0:GENERAL PRINCIPLES.
- AS/NZS 4505:2012 GARAGE DOORS AND OTHER LARGE ACCESS DOORS.
- AS 4100:1998 STEEL STRUCTURES.
- AS 3700:2001 MASONRY STRUCTURES.
- AS/NZS 1170.1:2002 STRUCTURAL DESIGN ACTIONS - PART 1: PERMANENT, IMPOSED AND OTHER ACTIONS.
- AS/NZS 4600:2005 COLD FORMED STRUCTURES.
- AS/NZS 1664.1:1997 ALUMINIUM STRUCTURES PART 1: LIMIT STATE DESIGN.
- AS 1720.1-2010 TIMBER STRUCTURES PART 1:DESIGN METHODS.
- THE SERIES 1 ROLL-A-DOORS INCLUDE THE FOLLOWING B&D PRODUCT/MODEL NAMES:
  a) SQUARELINE™ DELUXE ROLL-A-DOOR● (MODEL R1D)
  b) FIRMADOOR (MODEL R1F)
  c) ROLLMASTA (MODEL R1R)
  d) ROLL-A-DOOR™ MINI WAREHOUSE MODEL (MODEL R1M)
  e) ROLL-A-DOOR™ MINI WAREHOUSE (R1ME)
- ALL DOOR COMPONENTS TO BE IN ACCORDANCE WITH STANDARD B&D SERIES 1 ROLL-A-DOOR MANUFACTURING.
- DOOR INSTALLATION TO BE IN ACCORDANCE WITH STANDARD B&D SERIES 1 ROLL-A-DOOR INSTALLATION GUIDELINES.







NYLOFELT STRIP ALONG EDGE OF CURTAIN

WASHER, 2 HOLE ϕ3.3 x 1mm FITTED UNDER TAIL OF RIVET

2 x RIVETS 72-STST-42

CURTAIN MATERIAL AND WINDCLIPS - PART PLAN

SCALE 1:2

SECTION 1/-

SCALE = 1:2

ISSUE	DATE	AMENDMENTS
F	16.06.13	GENERAL REVISION
G	09.07.13	GENERAL REVISION
H	01.11.13	GENERAL REVISION
J	02.06.14	GENERAL REVISION
K	24.12.14	GENERAL REVISION

CLIENT: B&D AUSTRALIA PTY LTD

PROJECT: B&D SERIES 1 ROLL-A-DOOR (WINDLOCKED) FOR USE IN WIND REGION C, TC2

DRAWING: SERIES 1 ROLL-A-DOOR ELEVATION, PART PLAN, SECTION DETAIL, GRAPH AND NOTES

James Ellis & Associates
Consulting Structural Engineers

SCALE

DESIGNED J.E.

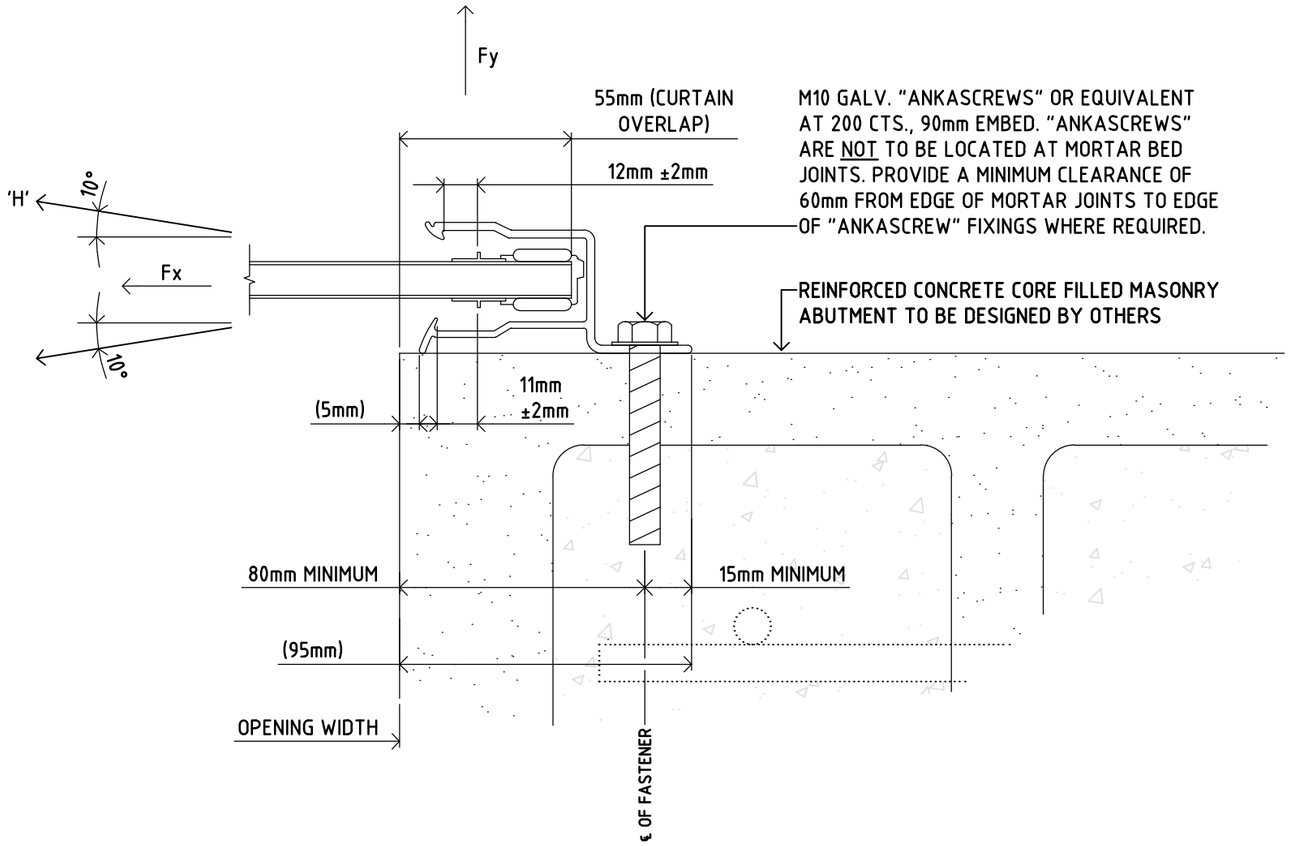
DRAWN AAB

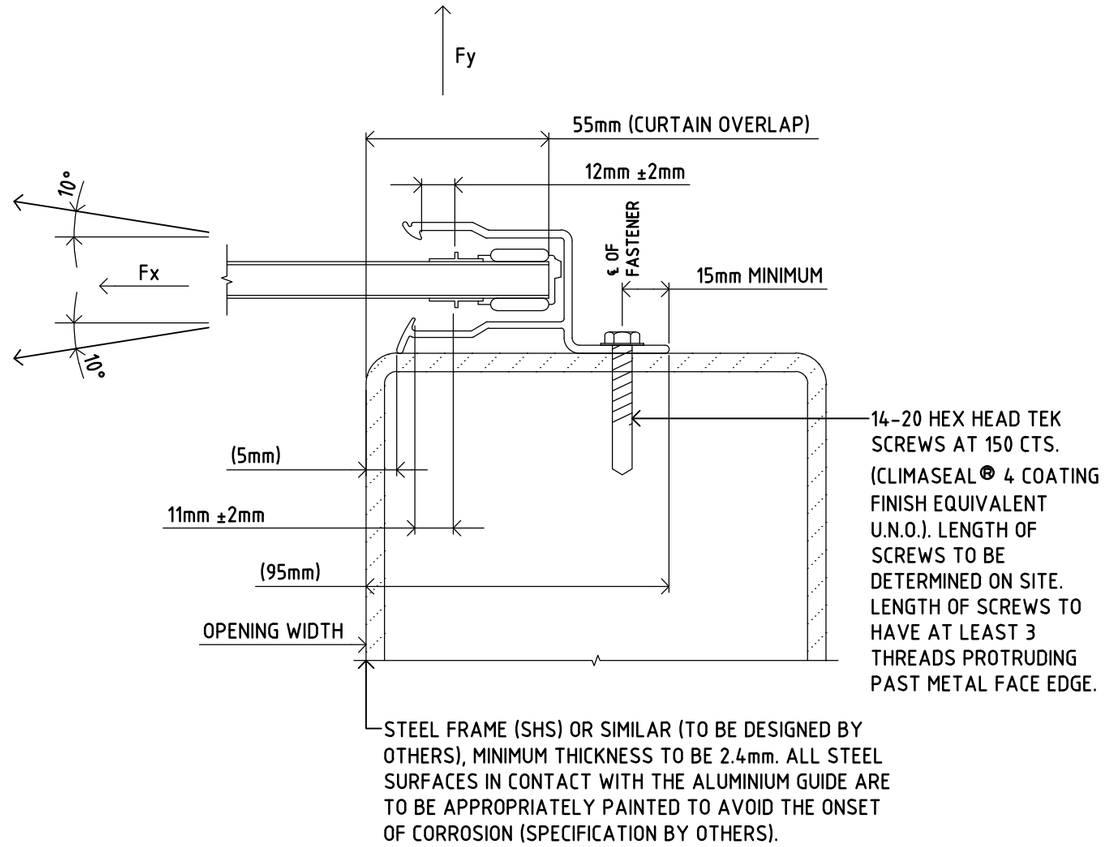
CHECKED& APPROVED

DATE Dec 2014

DRAWING No. S01 K

PROJECT No. 2212





SECTION 2/S01 PLAN

SCALE = 1:2

GUIDE SUPPORTED BY REINFORCED CONCRETE CORE FILLED MASONRY UNITS FOR A MAXIMUM DOOR SPAN (L) OF 3150mm IN REGION C TC2 AND UP TO A MAXIMUM DESIGN WIND PRESSURE OF 3.26 kPa.

NOTE:

- THE ABOVE FIXING DETAIL HAS BEEN BASED ON A MAXIMUM DESIGN SPAN (L) OF 3150mm.
- FIXINGS INTO REINFORCED CONCRETE CORE FILLED BLOCK WALL ABUTMENTS HAVE BEEN DESIGNED USING THE RAMSET-SPECIFIERS RESOURCE BOOK.
- THE FOLLOWING CODES OF PRACTICE WERE ALSO CONSIDERED IN THE DESIGN OF THE ABOVE FIXING DETAIL:
  - AS/NZS 1664.1:1997 ALUMINIUM STRUCTURES PART 1: LIMIT STATE DESIGN.
  - AS 3700-2001 MASONRY STRUCTURES

SECTION 2/S01 PLAN

SCALE = 1:2

GUIDE SUPPORTED BY MILD STEEL FRAME FOR A MAXIMUM DOOR SPAN (L) OF 3150mm IN REGION C TC2 AND UP TO A MAXIMUM DESIGN WIND PRESSURE OF 3.26 kPa.

NOTE:

- THE ABOVE FIXING DETAIL HAS BEEN BASED ON A MAXIMUM DESIGN SPAN (L) OF 3150mm.
- FIXINGS INTO STRUCTURAL STEEL ABUTMENTS HAVE BEEN DESIGNED USING TECHNICAL DATA PROVIDED BY BUILDEX FASTERNERS.
- STAINLESS STEEL TEK SCREWS IN LIEU OF CLIMASEAL® 4 COATED TEK SCREWS ARE TO BE USED IN HIGHLY CORROSIVE ENVIRONMENTS.
- THE FOLLOWING CODES OF PRACTICE WERE ALSO CONSIDERED IN THE DESIGN OF THE ABOVE FIXING DETAIL:
  - AS 4100:1998 STEEL STRUCTURES.
  - AS/NZS 4600:2005 COLD FORMED STEEL STRUCTURES
  - AS/NZS 1664.1:1997 ALUMINIUM STRUCTURES PART 1:LIMIT STATE DESIGN.

ISSUE	DATE	AMENDMENTS
F	16.06.13	GENERAL REVISION
G	09.07.13	GENERAL REVISION
H	01.11.13	GENERAL REVISION
J	02.06.14	GENERAL REVISION
K	24.12.14	GENERAL REVISION

CLIENT: B&D AUSTRALIA PTY LTD

PROJECT: B&D SERIES 1 ROLL-A-DOOR (WINDLOCKED) FOR USE IN WIND REGION C, TC2

DRAWING: SERIES 1 ROLL-A-DOOR SUPPORT SECTION DETAILS

James Ellis & Associates
Consulting Structural Engineers

SCALE

DESIGNED J.E.

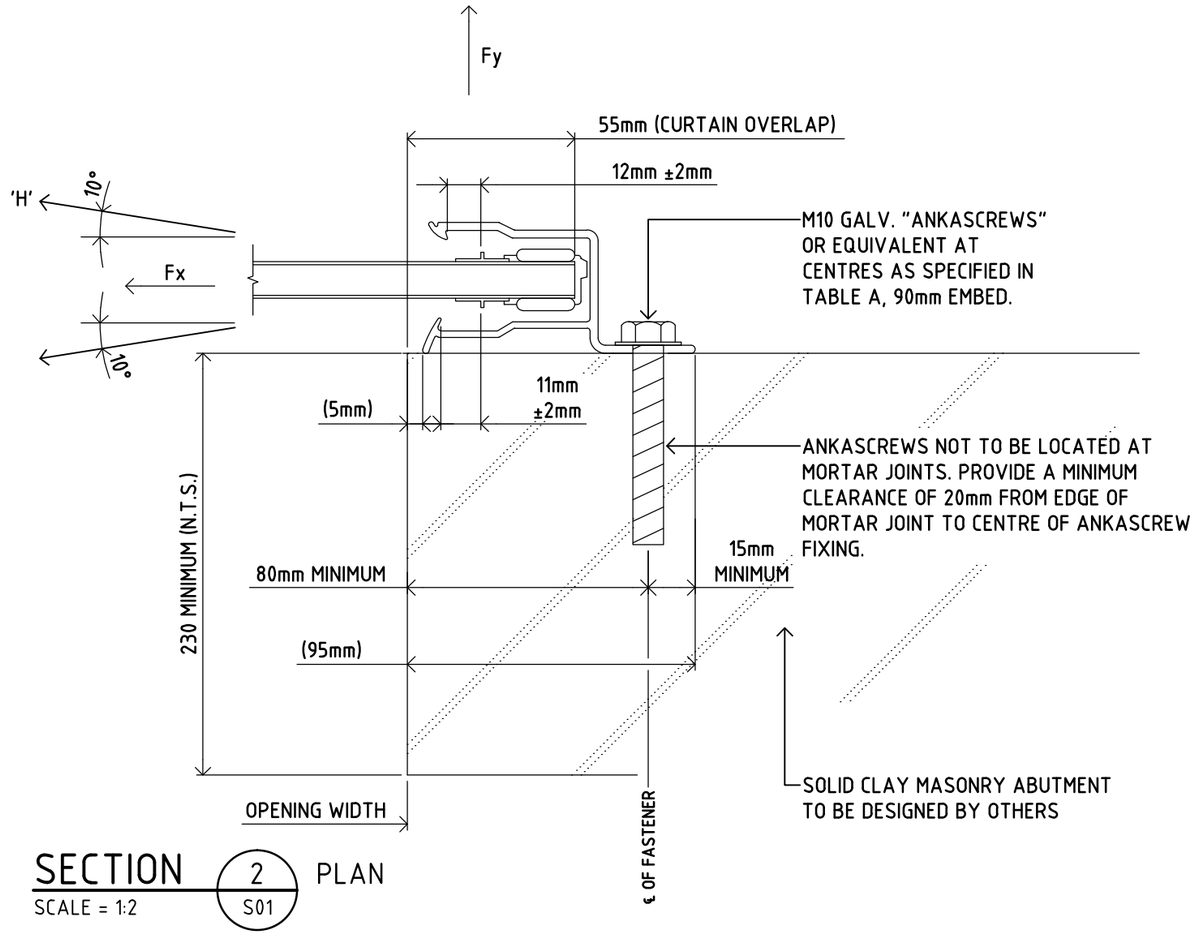
DRAWN AAB

CHECKED& APPROVED

DATE Dec 2014

DRAWING No. S02 K

PROJECT No. 2212



SECTION 2 PLAN
SCALE = 1:2 S01

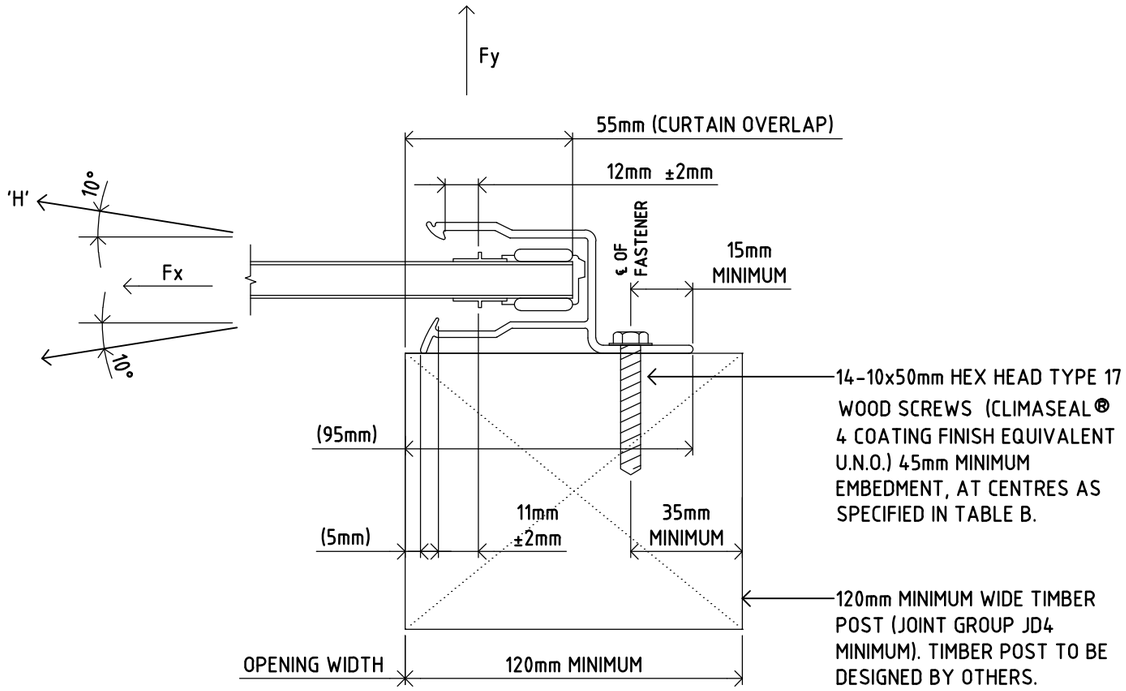
GUIDE SUPPORTED BY SOLID CLAY MASONRY WALLS FOR A MAXIMUM DOOR SPAN (L) OF 3150mm.
FOR USE IN WIND REGIONS A AND B, TC2 AND UP TO A MAXIMUM DESIGN WIND PRESSURE AS NOMINATED IN TABLE A.

TABLE A

FASTENING SPECIFICATIONS INTO SOLID CLAY MASONRY ABUTMENTS

WIND REGION	TERRAIN CATEGORY	MAXIMUM DESIGN WIND PRESSURE (kPa)	SPACING (mm)
A	TC2	1.10 kPa	255mm (ie. AT EVERY 3rd BRICK COURSE)
B	TC2	1.77 kPa	170mm (ie. AT EVERY 2nd BRICK COURSE)

NOTE:
- THE ABOVE FIXING DETAIL HAS BEEN BASED ON A MAXIMUM DESIGN SPAN (L) OF 3150mm.
- THE ABOVE FIXING DETAIL APPLIES TO THE USE OF SOLID CLAY MASONRY UNITS FOR THE CONSTRUCTION OF THE ABUTMENTS.
- FIXINGS INTO SOLID CLAY MASONRY ABUTMENTS HAVE BEEN DESIGNED USING THE RAMSET-SPECIFIERS RESOURCE BOOK.
- THE FOLLOWING CODES OF PRACTICE WERE ALSO CONSIDERED IN THE DESIGN OF THE ABOVE FIXING DETAIL:
  AS/NZS 1664.1:1997 ALUMINIUM STRUCTURES PART 1: LIMIT STATE DESIGN.
  AS 3700-2001 MASONRY STRUCTURES



SECTION 2 PLAN
SCALE = 1:2 S01

GUIDE SUPPORTED BY TIMBER FRAMED WALLS FOR A MAXIMUM DOOR SPAN (L) OF 3150mm IN REGIONS A, B AND C, TC2 AND UP TO A MAXIMUM DESIGN WIND PRESSURE AS NOMINATED IN TABLE B.

TABLE B

FASTENING SPECIFICATIONS INTO TIMBER FRAMED ABUTMENTS

WIND REGION	TERRAIN CATEGORY	MAXIMUM DESIGN WIND PRESSURE (kPa)	SPACING (mm)
A	TC2	1.10 kPa	250mm
B	TC2	1.77 kPa	160mm
C	TC2	3.26 kPa	90mm

NOTE:
- THE ABOVE FIXING DETAIL HAS BEEN BASED ON A MAXIMUM DESIGN SPAN (L) OF 3150mm.
- FIXINGS INTO TIMBER FRAMED ABUTMENTS HAVE BEEN DESIGNED USING TECHNICAL DATA PROVIDED BY BUILDEX FASTERNERS.
- STAINLESS STEEL TEK SCREWS IN LIEU OF CLIMASEAL® 4 COATED TEK SCREWS ARE TO BE USED IN HIGHLY CORROSIVE ENVIRONMENTS.
- THE FOLLOWING CODES OF PRACTICE WERE ALSO CONSIDERED IN THE DESIGN OF THE ABOVE FIXING DETAIL:
  AS 1720.1-2010 TIMBER STRUCTURES PART 1:DESIGN METHODS.
  AS/NZS 1664.1:1997 ALUMINIUM STRUCTURES PART 1:LIMIT STATE DESIGN.

ISSUE	DATE	AMENDMENTS
F	16.06.13	GENERAL REVISION
G	09.07.13	GENERAL REVISION
H	01.11.13	GENERAL REVISION
J	02.06.14	GENERAL REVISION
K	24.12.14	GENERAL REVISION

CLIENT: B&D AUSTRALIA PTY LTD

PROJECT: B&D SERIES 1 ROLL-A-DOOR (WINDLOCKED)
FOR USE IN WIND REGION C, TC2

DRAWING: SERIES 1 ROLL-A-DOOR SUPPORT SECTION DETAIL

James Ellis & Associates
Consulting Structural Engineers

SCALE:
DESIGNED: J.E.
DRAWN: AAB
CHECKED& APPROVED:
DATE: Dec 2014

DRAWING No.: S03 K

PROJECT No.: 2212

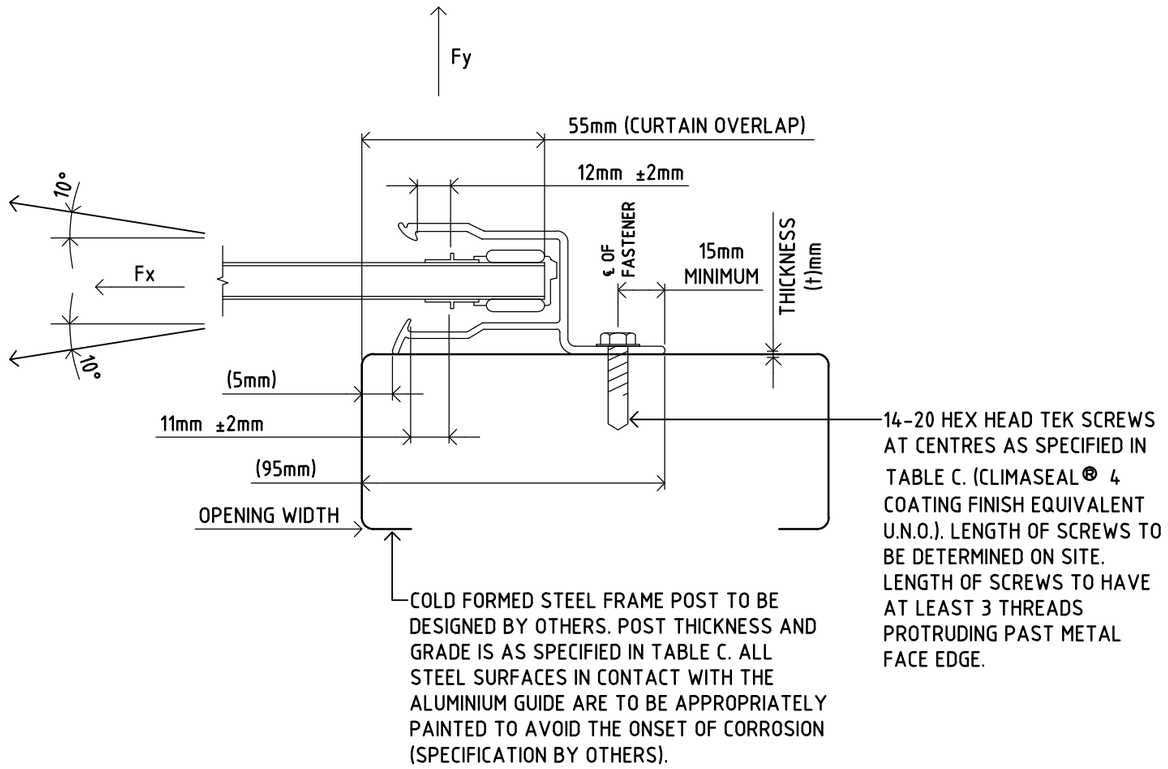


TABLE C

FASTENING SPECIFICATIONS INTO COLD FORMED STEEL ABUTMENT SUPPORTS COMPLYING WITH AS 1397-1993

THICKNESS (t)mm	GRADE	YIELD STRENGTH	TENSILE STRENGTH	SPACING (mm)
1mm	G550	550 MPa	550 MPa	100mm
1.2mm	G500	500 MPa	520 MPa	125mm
1.5mm	G450	450 MPa	480 MPa	150mm
1.9mm	G450	450 MPa	480 MPa	150mm

SECTION 2/S01 PLAN

SCALE = 1:2

GUIDE SUPPORTED BY COLD FORMED STEEL FRAME FOR A MAXIMUM DOOR SPAN (L) OF 3150mm IN REGION C TC2 AND UP TO A MAXIMUM DESIGN WIND PRESSURE OF 3.26 KPa.

NOTE:

- THE ABOVE FIXING DETAIL HAS BEEN BASED ON A MAXIMUM DESIGN SPAN OF 3150mm.
- FIXINGS INTO COLD FORMED STEEL ABUTMENTS HAVE BEEN DESIGNED USING TECHNICAL DATA PROVIDED BY BUILDEX FASTENERS.
- STAINLESS STEEL TEK SCREWS IN LIEU OF CLIMASEAL® 4 COATED TEK SCREWS ARE TO BE USED IN HIGHLY CORROSIVE ENVIRONMENTS.
- THE FOLLOWING CODES OF PRACTICE WERE ALSO CONSIDERED IN THE DESIGN OF THE ABOVE FIXING DETAIL:
  AS/NZS 4600:2005 COLD FORMED STEEL STRUCTURES
  AS/NZS 1664.1:1997 ALUMINIUM STRUCTURES PART 1:LIMIT STATE DESIGN.

ISSUE	DATE	AMENDMENTS
A	14.10.13	ISSUED FOR CONSTRUCTION
H	01.11.13	GENERAL REVISION
J	02.06.14	GENERAL REVISION
K	24.12.14	GENERAL REVISION

CLIENT: B&D AUSTRALIA PTY LTD

PROJECT: B&D SERIES 1 ROLL-A-DOOR (WINDLOCKED) FOR USE IN WIND REGION C, TC2

DRAWING: SERIES 1 ROLL-A-DOOR SUPPORT SECTION DETAIL

James Ellis & Associates
Consulting Structural Engineers

SCALE

DESIGNED J.E.

DRAWN AAB

CHECKED& APPROVED

DATE Dec 2014

DRAWING No. S04 K

PROJECT No. 2212