



Building Code Clause(s) B1

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance on use of Producer Statements (formerly page 2) is available at www.ipenz.nz)

ISSUED BY: CSEng.nz Ltd.
(Design Firm)

TO: Moddex New Zealand
(Owner/Developer)

TO BE SUPPLIED TO: Applicable Territorial Authority
(Building Consent Authority)

IN RESPECT OF: Moddex Barrier System: Tuffrail - Occupancy Class B/E (service & maintenance access)
(Description of Building Work)

AT: Various Locations across New Zealand
(Address)

Town/City: **LOT** **DP** **SO**
(Address)

We have been engaged by the owner/developer referred to above to provide:
Engineering design

.....
(Extent of Engagement)

services in respect of the requirements of Clause(s) B1 of the Building Code for:

All or Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

Compliance Documents issued by the Ministry of Business, Innovation & Employment B1/VM1, or
(verification method/acceptable solution)

Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled:

See schedule attached. and numbered ;
together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

- (i) Site verification of the following design assumptions see schedule attached*
- (ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:


CM1 CM2 CM3 CM4 CM5 (Engineering Categories) or as per agreement with owner/developer (Architectural)

I, Gerard Callebaut am: CPEng 1010705 # Reg Arch #
(Name of Design Professional)

I am a Member of: IPENZ NZIA and hold the following qualifications: B. Sc. Civil Engineering

The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.

The Design Firm is a member of ACENZ:

SIGNED BY Gerard Callebaut (Signature) 
(Name of Design Professional)

ON BEHALF OF CSEng.nz Ltd. Date 31/07/2020
(Design Firm)

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.
THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

SCHEDULE

*From page 1:

On behalf of the design firm and subject to site verification of the following design assumptions:

1. The substrate, to which the barrier is fixed, as designed by others, is able to resist the applied loads.
2. The installation of the barrier is in accordance with the limits and specifications as set out on the drawing.

DRAWINGS

Drawing Number	Sheet	Revision	Date	Description
190227-100-S001_1	1	2	29/06/2020	Tuffrail: Barrier Details and Specification
190227-100-S001_2	2	2	06/09/2019	Tuffrail: Barrier Details and Specification
200623-100-S002_1	1	0	30/07/2020	Tuffrail: Barrier Details and Specification
200623-100-S002_2	2	0	30/07/2020	Tuffrail: Barrier Details and Specification

DOCUMENTS

Document Number	Revision	Date	Description
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ALTERNATIVE SOLUTIONS

NZ Building Code Compliance Clause	Document Number	Date	Description
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GENERAL

- THESE SPECIFICATIONS SHALL TAKE PRECEDENCE UNLESS OTHERWISE ADVISED BY THE DESIGN ENGINEER
- COMPLY WITH CONTRACTORS HSE PLAN
- COMPLY WITH HEALTH & SAFETY IN EMPLOYMENT ACT & REGULATIONS
- MAINTAIN SAFE SITE AND WORK PRACTICES AT ALL TIMES
- ALL WORK AND MATERIALS SHALL COMPLY WITH THE BUILDING ACT & REGULATIONS
- THE BUILDING DESIGNER IS RESPONSIBLE FOR ENSURING THE NECESSARY SUPPORTING STRUCTURE IS PROVIDED FOR THE BARRIER SYSTEM
- THIS SUPPORTING STRUCTURE SHALL BE DESIGNED FOR THE MINIMUM DESIGN LOADS SPECIFIED IN THE BASIS OF DESIGN
- THE SUPPORTING STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE THE SPECIFIED BARRIER ANCHORS FOR CODE OF COMPLIANCE ON COMPLETION
- CHECK ALL DIMENSIONS AND LEVELS ON SITE BEFORE STARTING CONSTRUCTION WORK. REFER ARCHITECTURAL DIMENSIONING FOR LAYOUT AND LEVELS. REFER ENGINEERING DIMENSIONING FOR DETAILS
- ALL COMPONENTS OF THE MODDEX BARRIER SYSTEM INCLUDING FIXINGS AND ANCHORS SHALL BE SUPPLIED BY MODDEX NZ

BASIS OF DESIGN

- DESIGN LIFE: 50 YEARS MINIMUM
- BUILDING OCCUPANCY: B, E
- LOADINGS: AS/NZS 1170.1 : 2002 - TABLE 3.3
AS 1657:2013 - CL6.1
- LIVE LOADINGS: LINE CONCENTRATED
0.35 kN/m
0.6 kN
N/A
INFILL

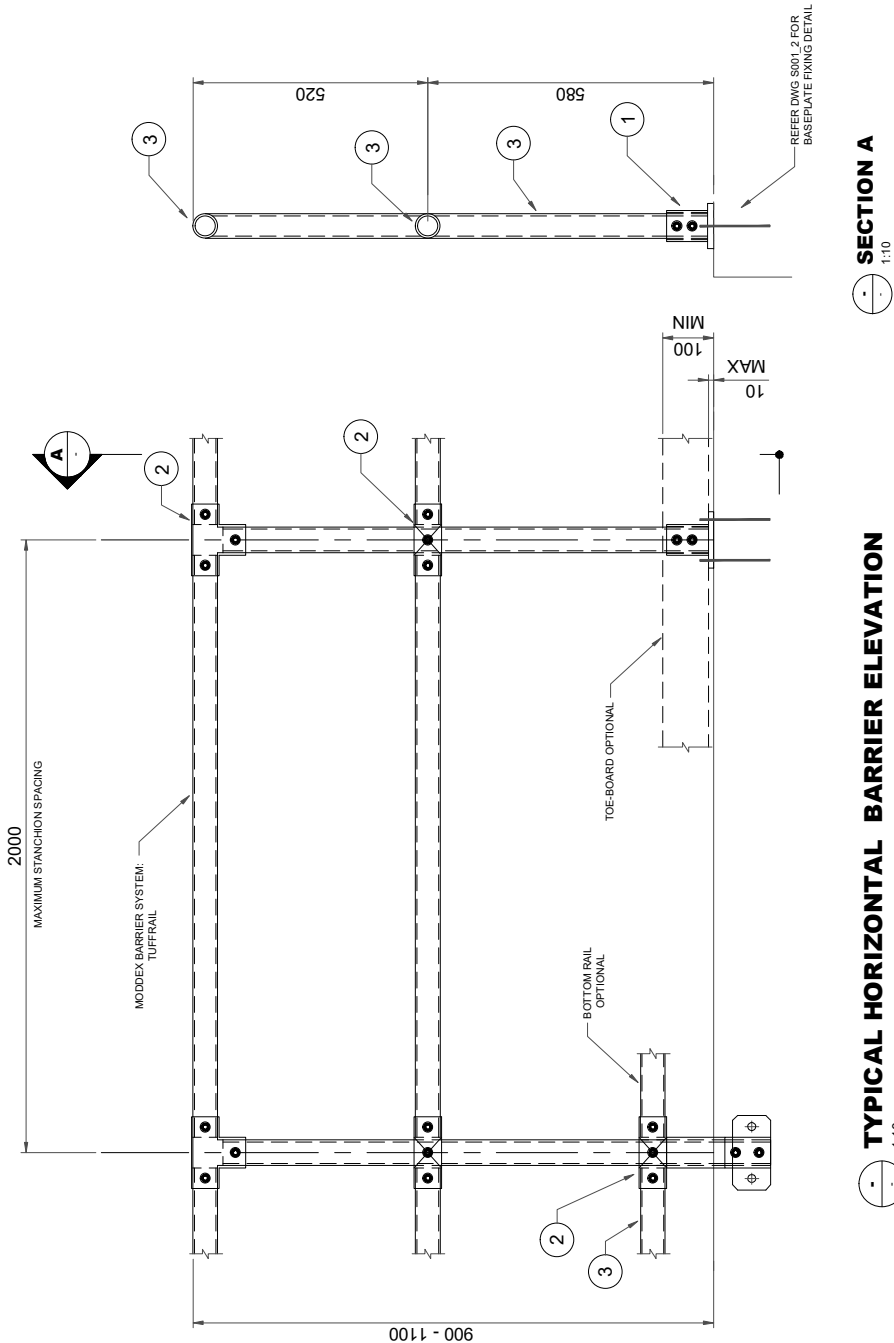
STRUCTURE

ITEM NO.	MATERIAL	GRADE
1	CAST BASE FLANGE	MALLEABLE CAST IRON
2	CAST CONNECTOR	MALLEABLE CAST IRON
3	48.3 OD x 3.2 GALVANIZED CHS	250

- ALL PIPE TO CONFORM TO: AS 1074
- GALVANIZING TO: AS/NZS 4680 : 2006
- REFER TO MODDEX BARRIER SYSTEM : TUFFRAIL FOR FURTHER PRODUCT SPECIFICATION DETAILS.

BARRIER CONFIGURATION OPTIONS

- TOP RAIL & MID RAIL
- TOP RAIL, MID RAIL & BOTTOM RAIL
- TOP RAIL, MID RAIL & TOE-BOARD
- TOP RAIL, MID RAIL, BOTTOM RAIL & TOEBOARD

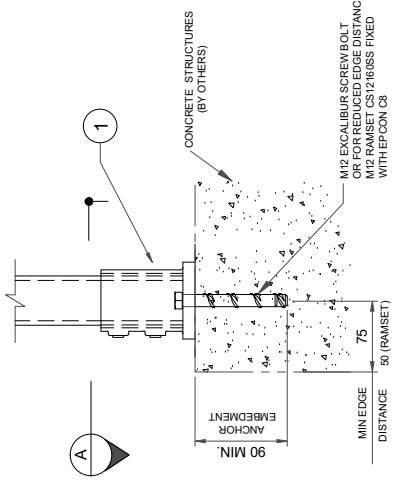


TYPICAL HORIZONTAL BARRIER ELEVATION
1:10

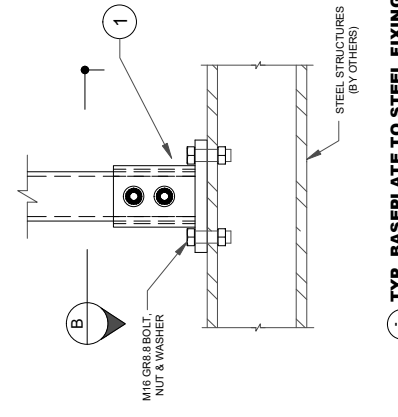
SECTION A
1:10

Rev	Date	Appd	Reason
2	29.06.2020	GC	HEIGHT RANGE
1	22.08.2019	GC	FACE MOUNT OPTION
0	14.03.2019	GC	APPROVED FOR CONSTRUCTION

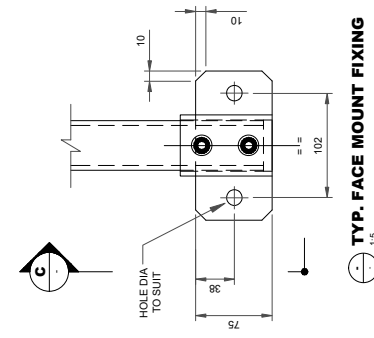
Client		moddex		CS Eng-nz CONSULTANTS ENGINEERS ARCHITECTS		info@cseng.nz	
Project		MODDEX BARRIER SYSTEM: TUFFRAIL		Sheet Title		BARRIER DETAILS AND SPECIFICATION	
Drawn: SDTS		Scale: 1:10		Job Number		190227	
File name:		Series		Sheet Number		S001_1	
Rev		100		Rev		2	



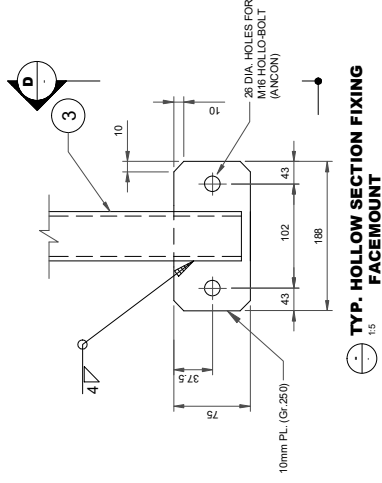
TYP. BASEPLATE TO CONCRETE FIXING
1:5 (TOP MOUNT)



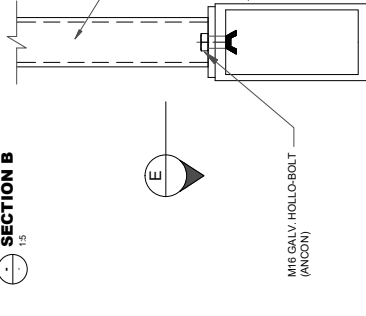
TYP. BASEPLATE TO STEEL FIXING
1:5 (TOP MOUNT)



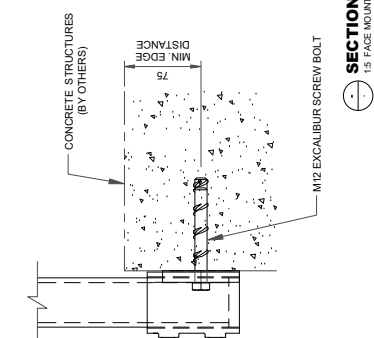
TYP. FACE MOUNT FIXING
1:5



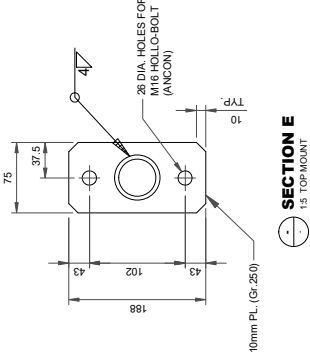
TYP. HOLLOW SECTION FIXING FACEMOUNT
1:5



TYP. HOLLOW SECTION FIXING TOP MOUNT
1:5



SECTION C
1:5 FACE MOUNT



SECTION E
1:5 TOP MOUNT

ANCHORS:

CONCRETE

- ANCHORS SHALL BE M12 EXCALIBUR SCREWBOLT UNLESS NOTED OTHERWISE.
- ALTERNATIVE ANCHOR OPTION REDUCED EDGE DISTANCE:
EXTERIOR ALL ZONES RAMSET CS12/16SS FIXED WITH EPON C8.
- CONCRETE STRUCTURES SUPPORTING BARRIER SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 30 MPa.

STEEL

- ANCHORS SHALL BE M16 BOLTS, NUTS AND WASHERS, (PROPERTY CLASS GRADE 8.8)

ANCHOR MATERIAL / COATING

- INTERIOR ZINC GALVANIZED (AS 1214)
- EXTERIOR ZONE B

Client		moddex		CS Eng. nz CONSULTANTS ENGINEERS		Project		Sheet Title		Drawn: SDTS		Scale: AS SHOWN	
HOLLOW SECTION FIXING		moddex		CS Eng. nz		BARRIER DETAILS AND SPECIFICATION		BARRIER DETAILS AND SPECIFICATION		File name:		AS SHOWN	
FACE MOUNT OPTION		moddex		CS Eng. nz		MODDEX BARRIER SYSTEM: TUFFRAIL		BARRIER DETAILS AND SPECIFICATION		Job Number		190227	
APPROVED FOR CONSTRUCTION		moddex		CS Eng. nz		MODDEX BARRIER SYSTEM: TUFFRAIL		BARRIER DETAILS AND SPECIFICATION		Series		100	
Date		moddex		CS Eng. nz		MODDEX BARRIER SYSTEM: TUFFRAIL		BARRIER DETAILS AND SPECIFICATION		Sheet Number		S001_2	
Appd		moddex		CS Eng. nz		MODDEX BARRIER SYSTEM: TUFFRAIL		BARRIER DETAILS AND SPECIFICATION		Rev		2	
Reason		moddex		CS Eng. nz		MODDEX BARRIER SYSTEM: TUFFRAIL		BARRIER DETAILS AND SPECIFICATION		Rev		2	

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6. THE BUILDING DESIGNER IS RESPONSIBLE FOR ENSURING THE NECESSARY SUPPORTING STRUCTURE IS PROVIDED FOR THE BARRIER SYSTEM.
7. THE SUPPORTING STRUCTURE SHALL BE DESIGNED FOR THE MINIMUM DESIGN LOADS SPECIFIED IN THE BASIS OF DESIGN.
8. THE SUPPORTING STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE THE SPECIFIED HANDRAIL ANCHORS.
9. OBTAIN BUILDING CONSENT AS REQUIRED. CALL FOR ALL SCHEDULED INSPECTIONS AND FINAL INSPECTION FOR CODE OF COMPLIANCE ON COMPLETION.
10. CHECK ALL DIMENSIONS AND LEVELS ON SITE BEFORE STARTING CONSTRUCTION WORK.
11. REFER ARCHITECTURAL DIMENSIONING FOR LAYOUT AND LEVELS.
12. REFER ENGINEERING DIMENSIONING FOR DETAILS.
13. ALL COMPONENTS OF THE MODDEX HANDRAIL SYSTEM INCLUDING FIXINGS AND ANCHORS SHALL BE SUPPLIED BY MODDEX NZ.

BASIS OF DESIGN

1. DESIGN LIFE 50 YEARS MINIMUM
2. BUILDING OCCUPANCY B. E
3. LOADINGS AS/NZS 1170.1 : 2002 - TABLE 3.3 AS 1687 : 2013 - Cl.6.1
4. LIVE LOADINGS LINE 0.35 kN/m CONCENTRATED 0.6 kN INFILL N/A

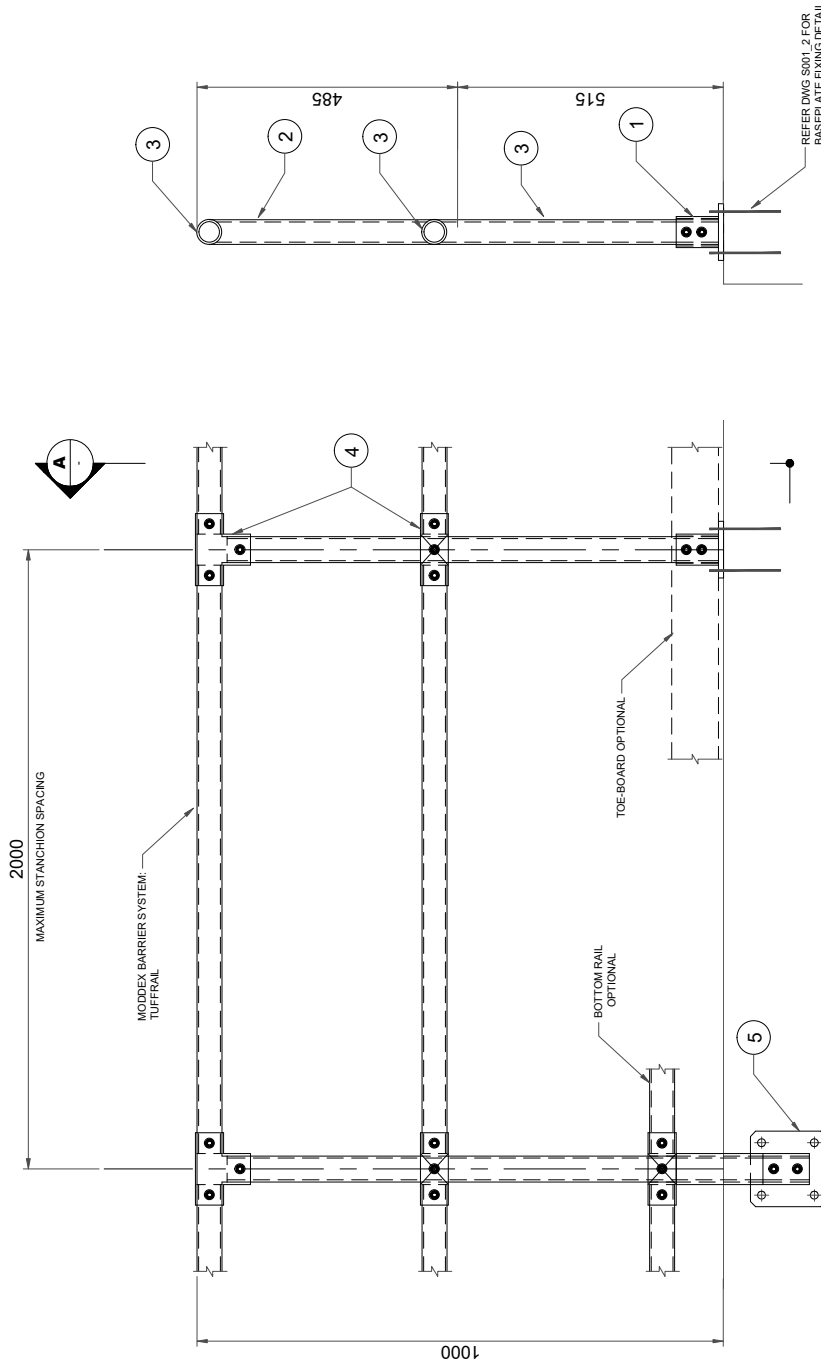
STRUCTURE

ITEM NO.	MATERIAL	GRADE
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2	CAST HANDRAIL CONNECTOR	MALLEABLE CAST IRON
3	48.3 OD x 3.2 GALVANIZED CHS	250
4	CAST CONNECTOR	MALLEABLE CAST IRON
5	CAST FACE MOUNT	MALLEABLE CAST IRON

1. ALL PIPE TO CONFORM TO :AS 1074
2. GALVANIZING TO :AS/NZS 4680 : 2006
3. REFER TO MODDEX HANDRAIL SYSTEM : TUFFRAIL FOR FURTHER PRODUCT SPECIFICATION DETAILS.

HANDRAIL CONFIGURATION OPTIONS

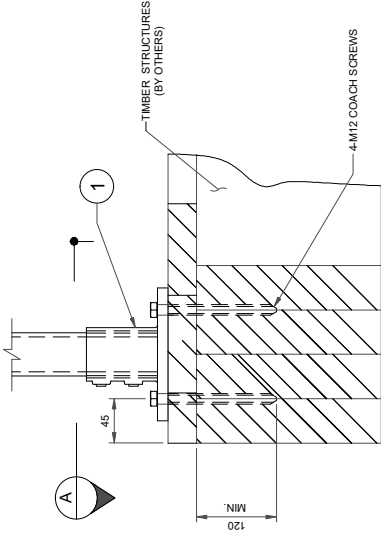
1. TOP RAIL & MID RAIL
2. TOP RAIL & BOTTOM RAIL
3. TOP RAIL, MID RAIL & TOE BOARD
4. TOP RAIL, MID RAIL, BOTTOM RAIL & TOE BOARD



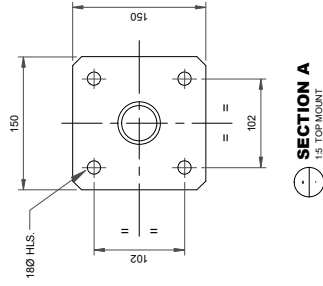
SECTION A
1:10

TYPICAL HORIZONTAL HANDRAIL ELEVATION
1:10

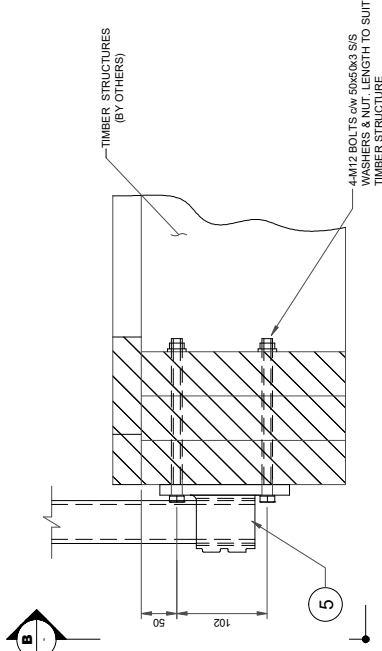
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Job Number		Series	
200623		100	
Sheet Title		Sheet Number	
BARRIER DETAILS AND SPECIFICATION		S002_1	
MODDEX BARRIER SYSTEM: TUFFRAIL		Rev	
Project		0	
Client		Revised	
Consultant		Date	
moddex		Appd	
CS Eng. nz		Date	
info@cseeng.nz		Date	
APPROVED FOR CONSTRUCTION		Date	
Rev		Date	
0		30.07.2020	
-		-	
-		-	



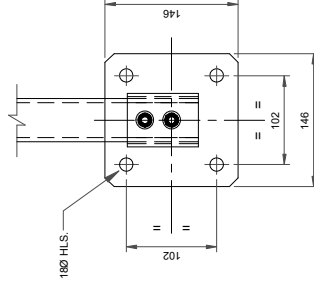
TYP. TOP MOUNT FIXING
1:5



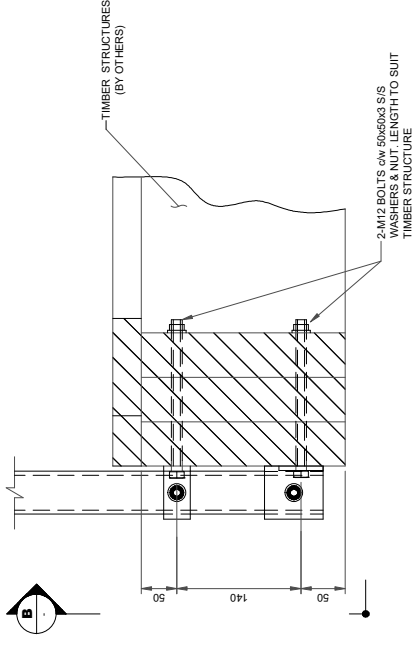
SECTION A
1:5 TOP MOUNT



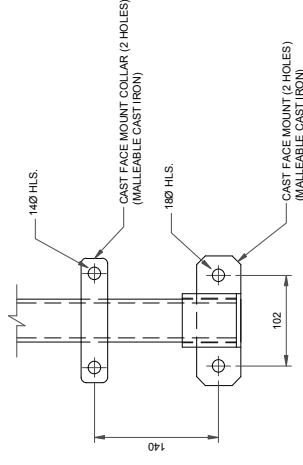
TYP. FACE MOUNT FIXING
1:5



SECTION B
1:5 FACE MOUNT



ALT. FACE MOUNT FIXING
1:5



SECTION C
1:5 FACE MOUNT

ANCHORS:

TIMBER:

- TIMBER STRUCTURES SUPPORTING BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE NEW ZEALAND BUILDING CODE AND NZS 3604 (TIMBER FRAMED BUILDINGS)

ANCHOR MATERIAL COATING (NZS 3604 - TBL 4.1)

- EXTERIOR, EXPOSED - TYPE 304 STAINLESS STEEL

Rev		Date	Appd	Reason
0	30.07.2020	GC		APPROVED FOR CONSTRUCTION
Rescon				
Client				
		Consultant		
		Project		
MODDEX BARRIER SYSTEM: TUFFRAIL		BARRIER DETAILS AND SPECIFICATION		
Drawn: SDTS		Scale: AS SHOWN		
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Job Number		Series		Rev
200623		100		S002_2
0		30.07.2020		0