

STONELAM SURFACES LLP

**DRY CLADDING
TECHNICAL
INFORMATION
GENERAL INSTALLATION GUIDELINES**

STONELAM[®]
THE FINEST NATURAL FACADES

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General Installation Guidelines

1. Stonelam Facade System

1.1

Stonelam Dry Cladding

The term 'cladding' refers to components that are attached to the primary structure of a building to form non-structural, external surfaces. This is as opposed to buildings in which the external surfaces are formed by structural elements, such as masonry walls, or applied surfaces such as render.

The Dry Cladding is the exterior skin, or envelope of a building, and includes all moisture barriers and siding materials used to cover the outside of the structure.

Dry Cladding can serve both a decorative and a functional while also purpose. It is used to complement the architectural style of the building wind, snow and other outside elements.

The dry cladding method creates a cleft of around 30 to 45 mm (1"-1.5") in between face of the wall and Stonelam covering.

1.2

Advantages of Stonelam Dry Cladding Installation

i) The dry cladding method is safe and it prevails the infill material (Stonelam) from falling off for years.

ii) This method allow for expansion and contraction of Stonelam in extreme weather conditions.

iii) The dry cladding method creates a cleft of around 30 to 45 mm (1"-1.5") in between face of the wall and Stonelam covering, providing a layer of air cushion that acts as a thermal barrier.

iv) The appearance of Stonelam used in dry cladding work looks pleasing and aesthetically design.

v) It is a time saving procedure.

1.3

Step by Step Installation

Procedure of or Stonelam Dry Cladding

- Step-1: Calculate The Material Requirement.

Before starting with the installation procedure you first need to calculate the area where you want to clad. You can calculate by simply measuring its length and breadth and then multiplying it. This would help you get an estimated amount of material for the cladding.

- Step-2: Selection of Materials.

i) The brackets must be made of Aluminium/ Galvanized MS. The dimensions

of the brackets and their Anchor depends on it's type as listed in Table- 1.

- Step-3: Site Preparation.

- i) Clean all the dirt and unwanted material from the surface of the application wall.
- ii) If the wall is constructed freshly make sure it is properly dried up and the surface is not friable so that the anchor could be firmly fixed in the hole drilled.

- Step-4: Installation Method.

- i) Dry cladding structure frame must be equally projected from building lines, so maintain line and level with the help of laser instrument or manual method.

Dry cladding frame attached directly to Building/ civil work in large/ small panels which span one or more stories or bays. Standard extruded aluminium tubes are used for making backup frame structure. They are light weight, non-corrosive and recyclable in nature, have high strength-to-weight ratio and come in raw finish and diverse colours.

- ii) Accurately locate the position of the hole for Al. L-type bracket fixing (25x38x2.5- 50

mm long).

- iii) Hold the Aluminium vertical members- 38x25x1.5 mm (as per architect design) with the help of L-type Aluminium brackets (25x38x2.5- 50 mm long).

vi) Connect vertical tubes with the help of horizontal RHS tubes (minimum size) 38x25X1.2mm and SS Screws. This will look like a Aluminium mesh structure.

v) Applying 3M double side VHB tape at the edges of front face of fraing structure.

vi) Filling structural sealant in gap the double adhesive tapes.

vii) Peel-off the top removable protection from the double side tapes.

viii) Place the first Stonelam tile on structural Sealant & VHB tape, leaving a clear gap at least 3mm between every two laminam tiles.

ix) Apply masking tape at both open edges of the Stonelam.

x) Filling weather sealant in joints of the Stonelam.

xi) Remove masking tape after filling the weather sealant and leave for curing (24-48 hrs.)

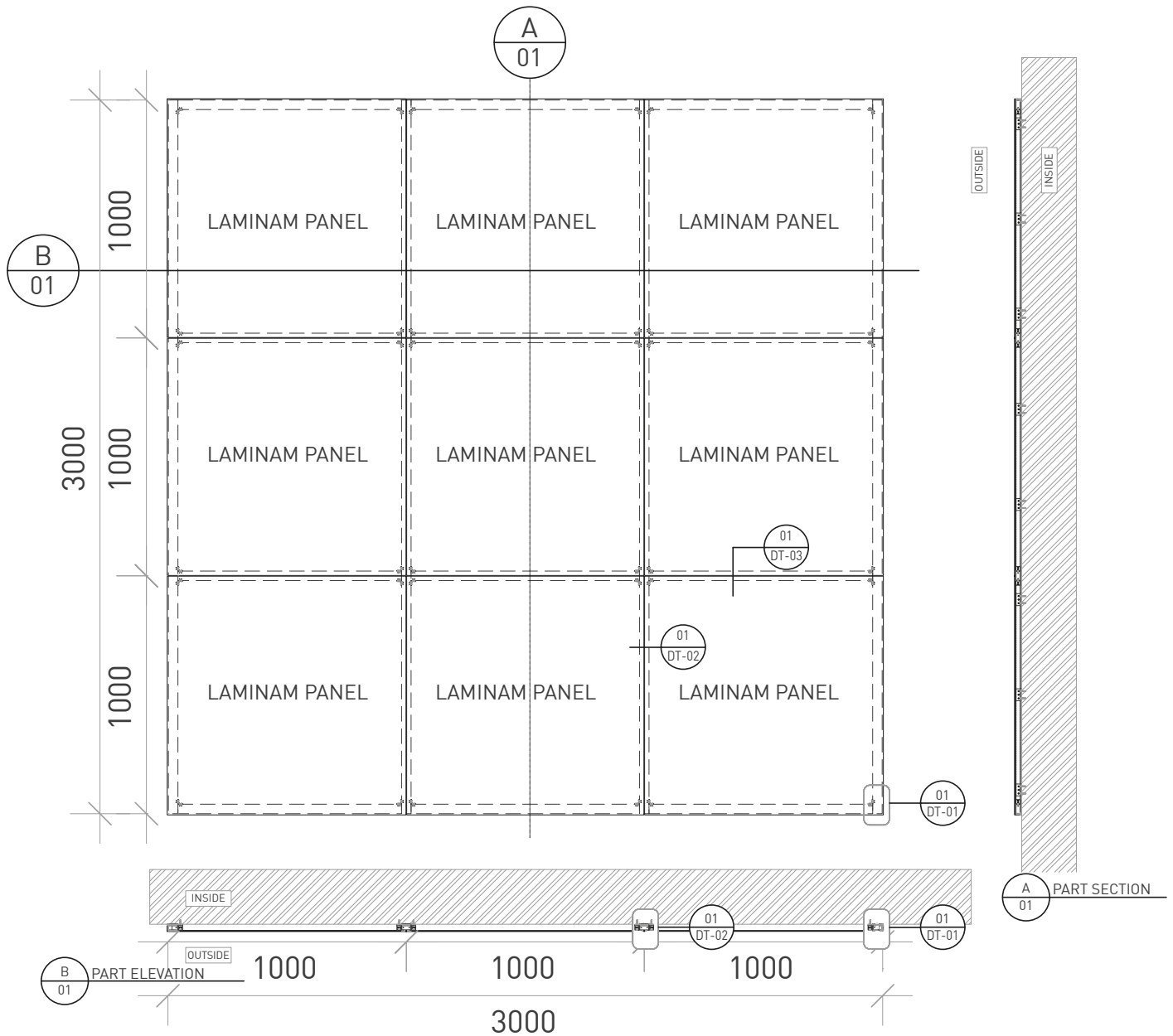
CONNECTION BRACKET, Table- 1

Sr. no Type of bracket Width (mm) Thickness (mm) Anchor dia. (mm)

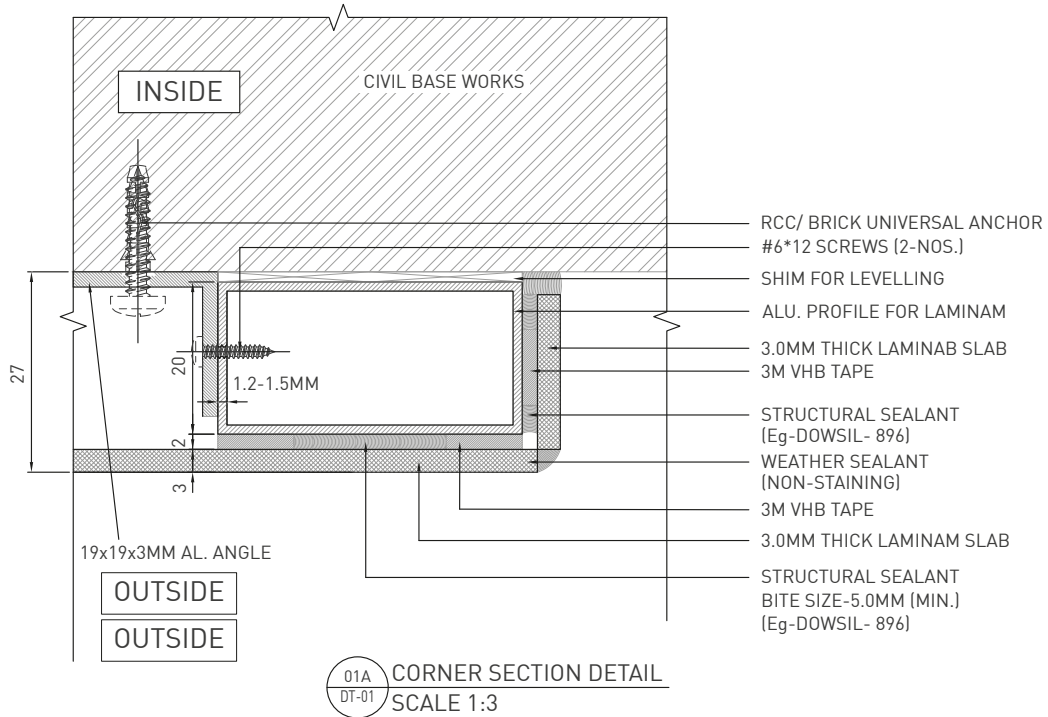
Sr. no	Type of bracket	Width (mm)	Thickness (mm)	Anchor dia (mm)
1.	Z-bracket	50-60	2.5-5.0	6.0-8.0
2.	L-bracket	50-60	2.5-4.0	6.0-8.0
3.	Omega bracket	50-60	3.0-5.0	6.0-8.8

STONELAM FACADE SYSTEM-1

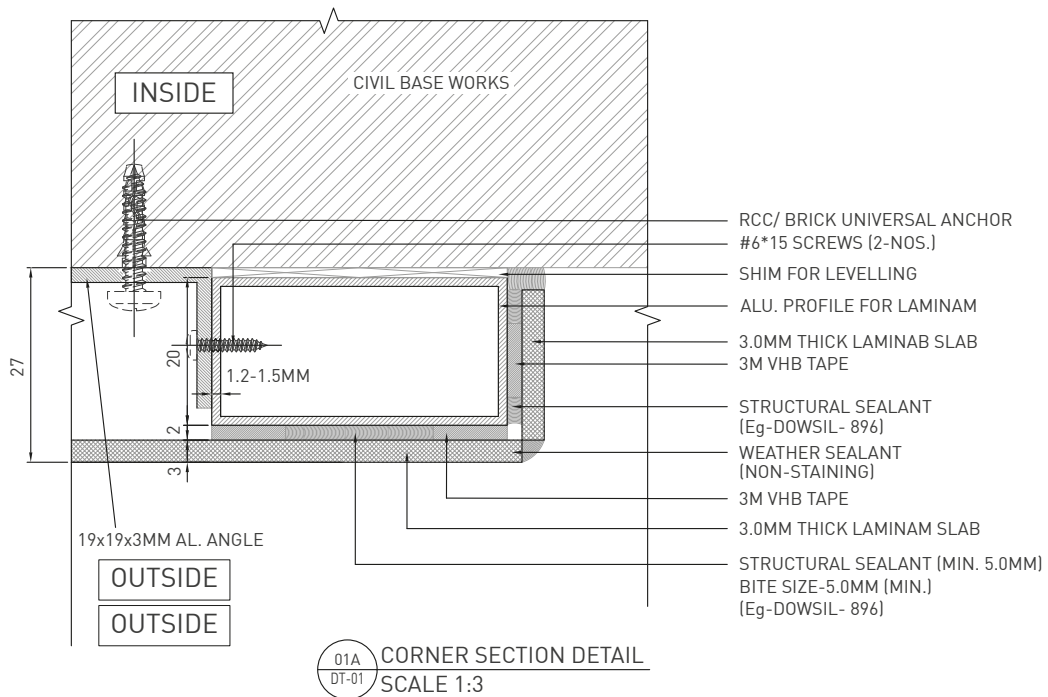
DRY CLADDING: PART ELEVATION & DETAILS



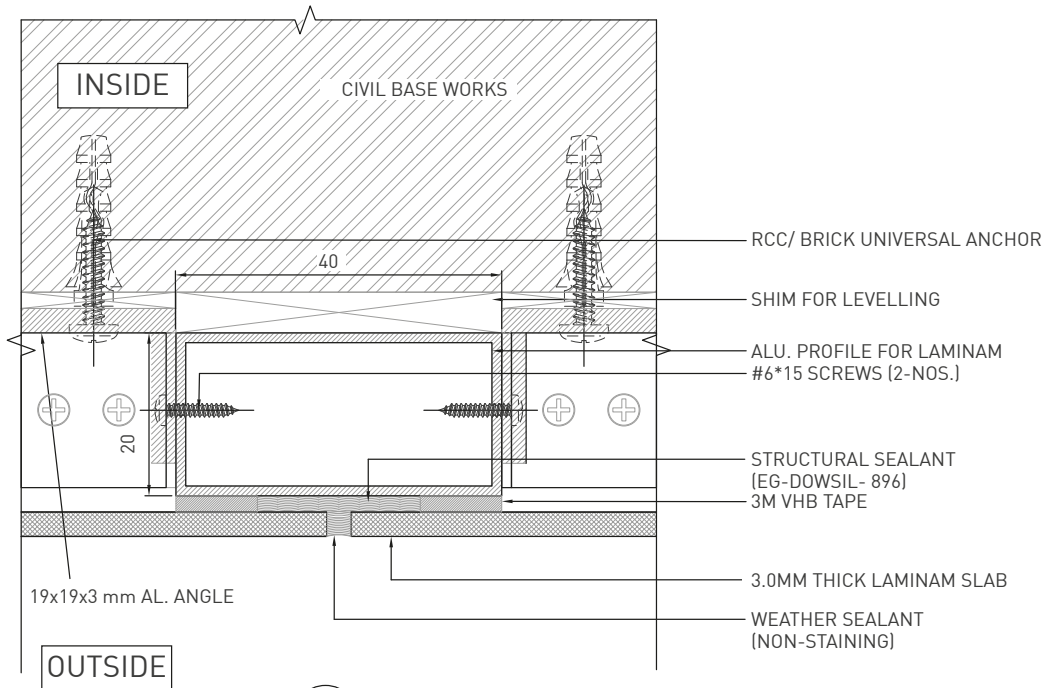
OPTION 1



OPTION 2

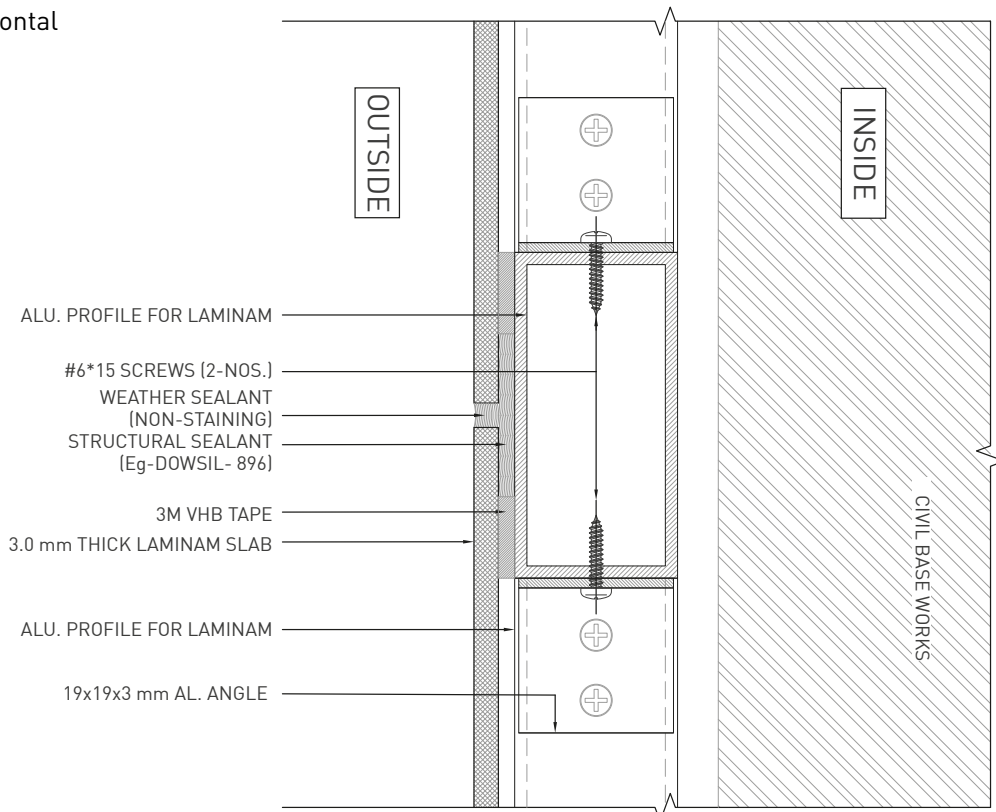


Vertical



01
DT-02 CORNER SECTION DETAIL
SCALE 1:3

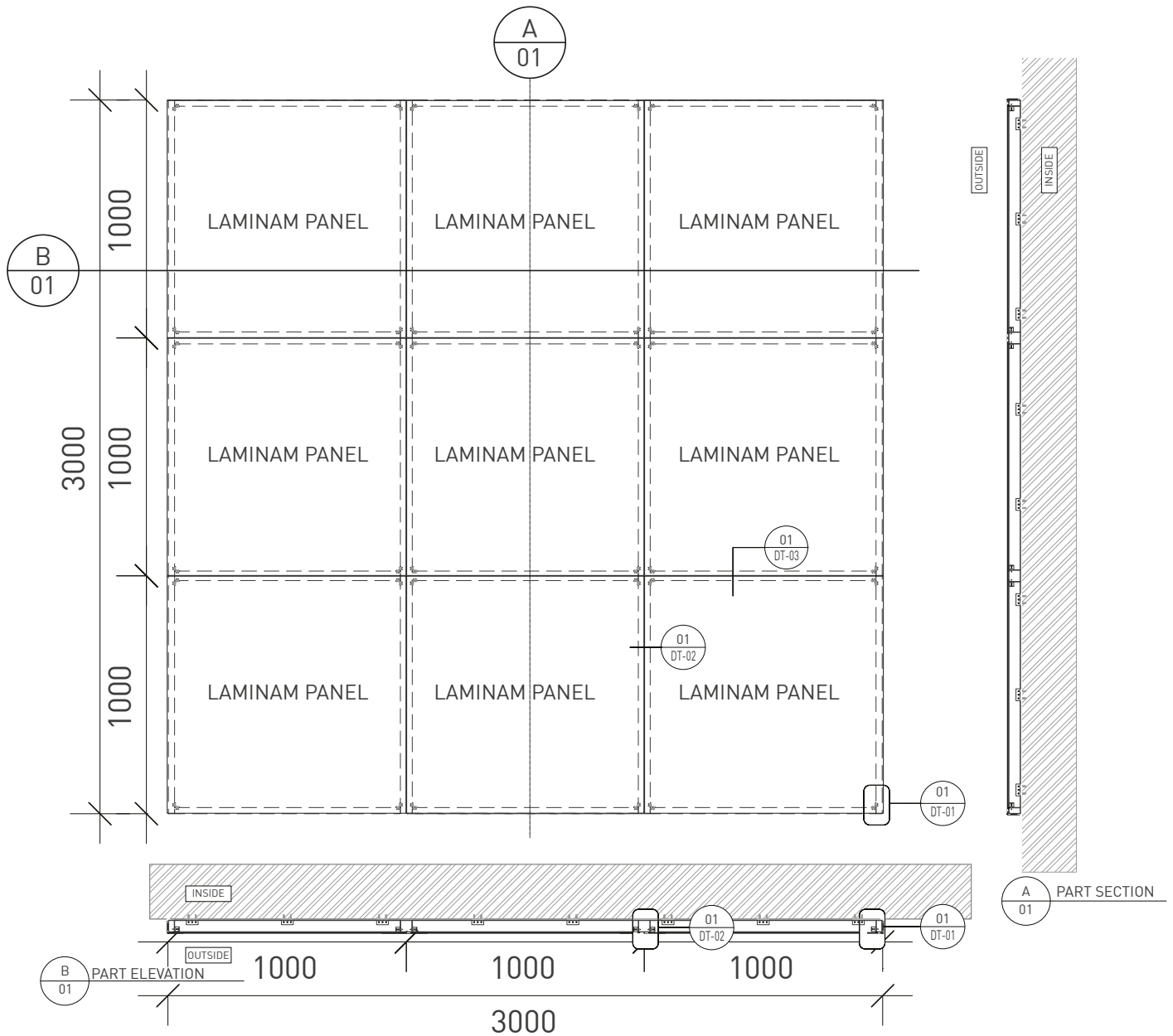
Horizontal



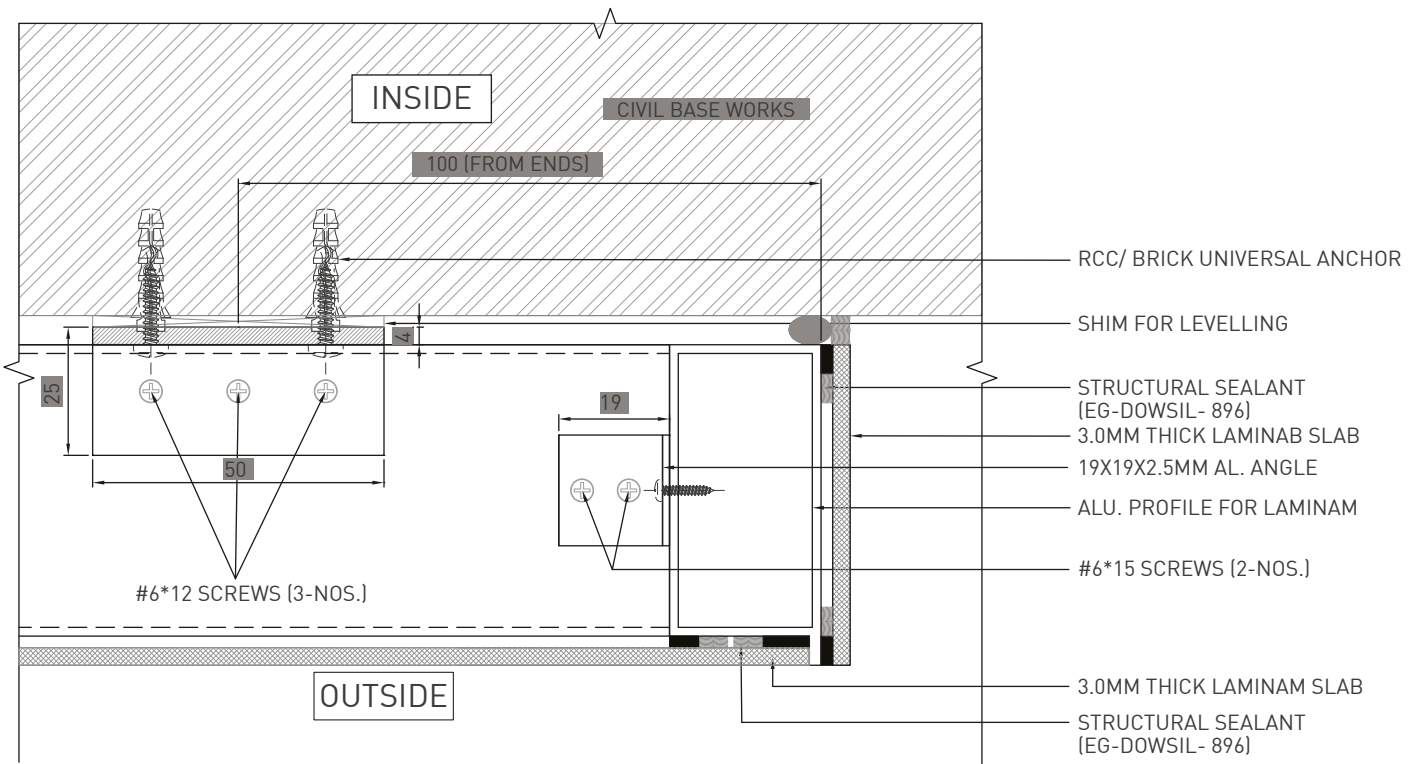
01
DT-03 MID SECTION DETAIL
SCALE 1:3

STONELAM FACADE SYSTEM-2

DRY CLADDING: PART ELEVATION & DETAILS

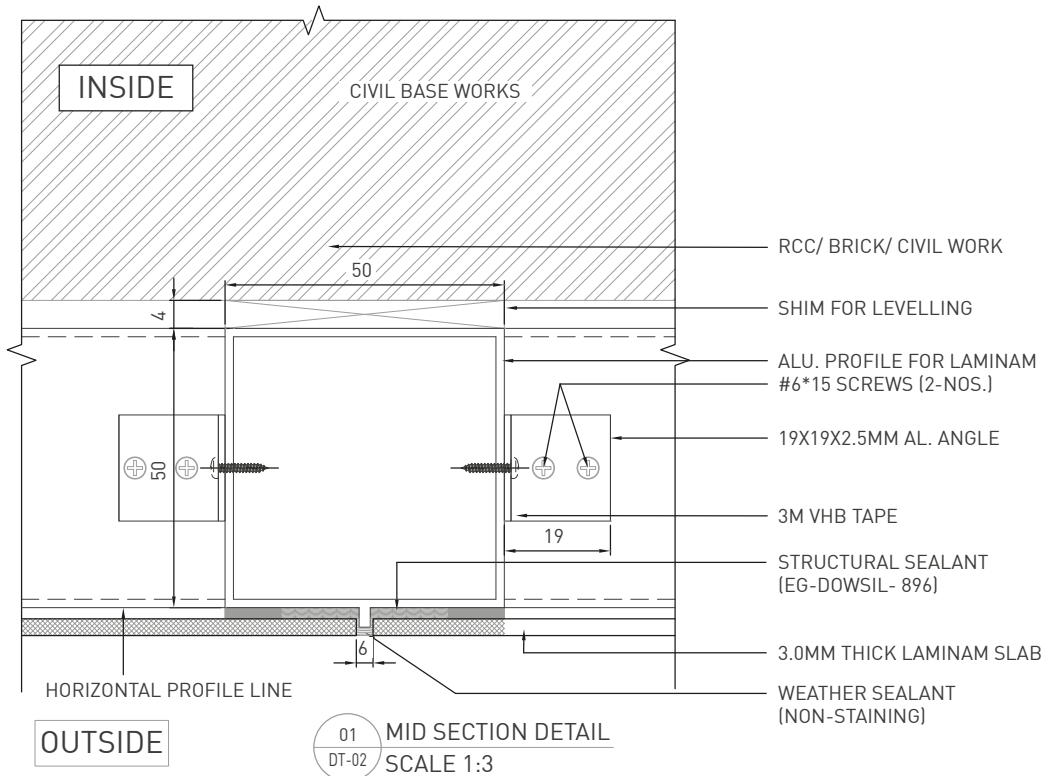


CORNER DETAILS



01 CORNER SECTION DETAIL
DT-01 SCALE 1:3

Vertical



Horizontal

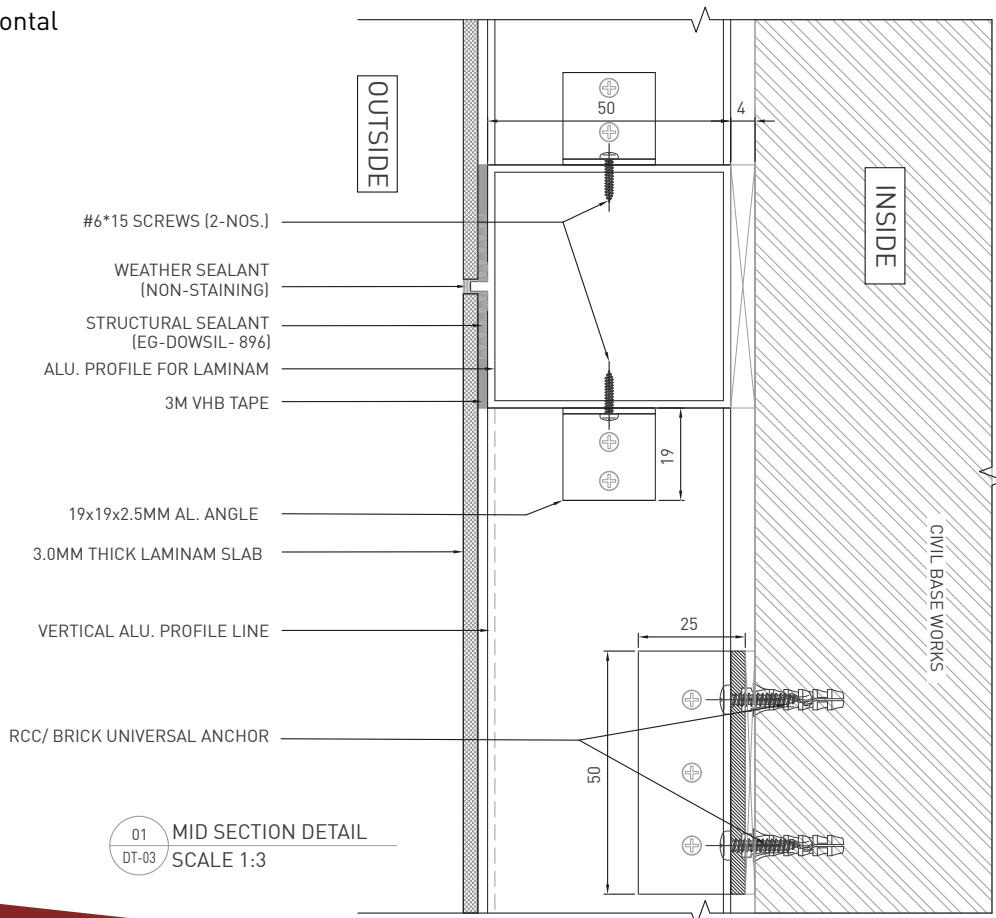


Table 2: DRY CLADDING: INSTALLATION QUALITY CONTROL (QC) CHECKLIST

DRY CLADDING: INSTALLATION QUALITY CONTROL CHECKLIST			No. _____
			Date: _____
Site Installation & Cladding Inspection (insert 'X' In Result column for items not meeting expectation)			
MATERIA STORAGE AREA			
1	Stonelam/Aluminum Storage	Shaded, ventilated, sheltered, dry and clean, enclosed storeroom	
2		Properly stacked, place on skids (min 50mm), supports intervals: Stonelam <1m, aluminum <0.5m	
3		Stonelam slab stacking height ≤1.0m, stack height of aluminum profiles ≤ 0.5m	
4		Aluminum profiles are covered with soft materials	
5		Storage area should not contaminated by water vapour or condensation	
FABRICATION ENVIRONMENT			
6	Site/Project	Clean	
7		Workshop ambient temperature greater than 17°C	
8		Tools and Machines are clean	
9		Working table is clean	
10		Material transfer passage is clean and free of obstacles	
FABRICATION PROCESSES			
11	Measures for Stonelam Slabs	Stonelam slabs are lifted and not being pulled out from the storage racks	
12		Stonelam slabs to be cut according to Architect Drawings & Design.	
13		Stonelam profiles stored for at least 3 weeks before bending process	
14	Stonelam Cutting Blade	Diamond saw blade, Blade diameter 100-110mm, speed : 3400-13000 rpm (Bosch, Hitachi etc.)	
15	Aluminum Material Cutting	Aluminum Profiles are with 1-2 mm bending limit in full length (approx.- 3600 mm)	
16		Profiles cutting length tolerance: ±0.5mm, angle ±0.5°	
17		When using mechanical joint, Aluminum tube thickness must be equal or greater than 1.2 mm	
18	Aluminum Connecting Cleats	Aluminum wall thickness ≥2.5mm or more	
19		When profile length > 600mm, there must be supporting cleat in the profile	
20	Screw Fixing	Interval between securing screws ≤400mm, screw distance from the edge/corner ≤150mm	
21		There should be at least 3 securing screws for every cleat connection	
22		Self-drilling self-tapping screws is used	
23	Screw Fixing	Interval between securing screws ≤400mm, screw distance from the edge/corner ≤150mm	
24		There should be at least 3 securing screws for every cleat connection	
25		Self-drilling self-tapping screws is used	
26	Assembly	All screw for connections are firmly secured to the Aluminum tubes of the dadding frame	
27		Screws are correctly and appropriately selected and used; stainless steel for exposed screws	
28		Hole diameter for sett-tapping screws is dx0.8	
29		Self-tapping screws should be screw-in once; no re-screwing	
30		Mechanical joint connecting screws should be pan head	
31	Final checks	Visual checks: no scratches, slip markings, colour change, crack	
32		Silicon filling checks: width, height and comers	
33		Stability checks : Aluminum frame firmly installed and no deformation	
Inspector		Inspection stamp:	Inspection date:
Corrective actions (if failed):		Correction result:	
1	_____	1	_____
2	_____	2	_____
3	_____	3	_____
4	_____	4	_____
5	_____	5	_____
			Result: P = Passed V = Failed
			Supervisor signature:

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